

Portfolio Annual Report 2008: Markets, Trade, Policy, and International Development

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Cooperative State Research, Education, and Extension Service
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Portfolio Annual Report

Executive Summary

Global food shortages, price increases and the resulting starvation and malnourishment in some regions have become more pronounced. Skyrocketing agricultural commodity prices are worrisome to consumers and policymakers world wide. Protests and food riots have occurred in over 30 countries, and while some importing nations are easing tariffs to encourage trade, some exporters are limiting trade to protect short supplies. As prices continued to rise over the past several months, key rice-growing countries imposed export restrictions leading to even tighter supplies; countries importing rice faced sticker shock, with prices 60 per cent to 70 per cent higher than just a few months ago. In some cases, family food expenditures have risen dramatically.

Agricultural markets and trade are being profoundly affected by the dramatic, ongoing expansion of biofuels production. Biofuels technology development, fossil energy availability, and government policy impact the agricultural and natural resource economy and the world community.

This situation is not likely to improve any time soon and much is needed to understand and develop strategies to mitigate the devastating impacts of world food shortages and flow of goods and services in the agricultural sector.

To help alleviate some of the constraints CSREES provides program leadership and funding to a combination of research, education and extension programs that enhance the performance of complex international and domestic marketing, trade, policy and development systems by helping policy makers, researchers, producers, processors, wholesalers, retailers, consumers, and society make better choices and decisions. To that end, work is conducted through the Market, Trade, Policy, and International Development portfolio and its key components described below.

While much remains to be done, significant progress has been achieved. Some outcomes are highlighted:

- Researchers conducted multiple competitive and Hatch funded studies to compare how the US, competing countries, and importing countries grow, process, market, and distribute agricultural products and identified emerging trends and areas of unmet consumer demand. The project worked benefitted more than 900 Midwest agribusiness firms, exposed more than 250 clients to agricultural export assistance opportunities, and introduced international visitors to agricultural technology, expertise and products.
- Researchers examined how food safety and quality issues related to red meat production impact the global competitiveness of U.S. products. Competitive program and Hatch findings were used by U.S. livestock and meat industries to make improvements in production practices, marketing, and food safety best practices thereby enhancing global the competitiveness of their products.

- NRI research conducted on the economic interrelationships in the domestic and foreign food and agricultural industries from the farm gate to the international market sector, and evaluated factors in U.S. and abroad that influence trade prospects and patterns. Based on findings U.S. policymakers formulated their concessions in international trade negotiations (including the Doha round of WTO)
- Researchers investigated methods to improve economic opportunities in agriculture, food and natural resource sectors. Based on Hatch funded research findings, a state assisted 1,084 citizens and businesses with concept development, business planning, advanced business studies, assistance after start-up. The state also helped launch 68 ventures (25 new firms, 43 business expansions) creating 430 direct jobs, invested capital totaling \$131 million; and generated annual revenues of \$182 million.

Section I: Portfolio Overview

Portfolio Planning

Portfolio Mission: The CSREES Markets, Trade, Policy, and International Development portfolio advances marketing, trade, public policy, and development-related knowledge about agricultural, forestry, natural resource and related products and services to public and private constituencies.

Portfolio Vision: Enhance the competitiveness of US agriculture and natural resources worldwide.

Rationale: Enhanced competitiveness in agricultural and natural resource enterprises benefits producers, consumers and citizens in the U.S. and world wide. From the microeconomic perspective, improved competitiveness means that market share and income of the individual can be sustained or increased, and that consumers are assured of choices and competitive prices. At the macro level, these benefits accrue to industries, sectors, and societies. Broadly speaking, competitiveness is enhanced by reducing costs, that is by maximizing human, and natural resources, water or fertilizer, or reducing waste, for example post harvest spoilage, inefficient transportation, or food waste. Knowledge of marketing, trade, policy and international development contributes to more efficient and competitive food and fiber markets by identifying choices, opportunities and the consequences of the actions of producers, consumers, policy makers, and business decision makers.

Portfolio Introduction

Global food shortages, price increases and the resulting starvation and malnourishment in some regions have become more pronounced. Skyrocketing agricultural commodity prices are worrisome to consumers and policymakers world wide. Protests and food riots have occurred in over 30 countries, and while some importing nations are easing tariffs to encourage trade, some exporters are limiting trade to protect short supplies. As prices

continued to rise over the past several months, key rice-growing countries imposed export restrictions leading to even tighter supplies; countries importing rice faced sticker shock, with prices 60 per cent to 70 per cent higher than just a few months ago. In some cases, family food expenditures have risen dramatically.

The World Bank issued an urgent call to rich nations to help stem rising food prices, warning that unrest in poor countries is spreading, and 100 million people risk falling deeper into poverty. United Nations Secretary General Ban Ki-moon has urged nations to seize an "historic opportunity to revitalize agriculture" as a way of tackling the food crisis. The UN Food and Agriculture Organization warned the developed countries that unless they increase yields, eliminate trade barriers, and move food to where it is needed most, a global catastrophe could result.

Agricultural markets and trade are being profoundly affected by the dramatic, ongoing expansion of biofuels production. Impacts of alternative scenarios regarding biofuels technology development, fossil energy availability, and government policy need to be examined to promote different outcomes for the agricultural economy and the world community.

CSREES provides program leadership and funding to a combination of research, education and extension programs that enhance the performance of complex international and domestic marketing, trade, policy and development systems by helping policy makers, researchers, producers, processors, wholesalers, retailers, consumers, and society make better choices and decisions.

The Markets, Trade, Policy, and International Development portfolio focuses on:

- **Market and Distribution Systems:** This component deals with issues related to agricultural, forestry, and natural resource outputs that are converted into products (including food, fiber, fuel, feed, industrial products, pharmaceuticals, and others) and services (including tourism, recreation, environmental services, etc.), and distributes them to users and consumers around the world
- **Trade:** Trade helps to build capacity for efficient transactions between sellers and buyers domestically; and in foreign countries to trade with one another and the United States
- **Public Policy:** Public policy includes a broad range of domestic and international policy not limited to agriculture and marketing; it includes everything but family policy and youth policy
- **International Development:** International development emphasizes economic development abroad while building domestic capacity to help Americans better understand and succeed in a globalized economy.

CSREES' leadership is primarily the responsibility of National Program Leaders (NPLs) working in consultation with the Agency's partners (primarily institutions of higher education and public agencies) to meet the needs of stakeholders (Congress, organizations, interest groups, and others). CSREES does not conduct research, education, and extension activities; instead it seeks partners, such as land-grant and other

public universities, to carry out these functions at the local, state, national, and international levels.

CSREES utilizes a diversity of authorizations and funding mechanisms to accomplish the goals of the portfolio. A diversity of funding promotes a variety of approaches that often meet the unique requirements of the Agency's diverse population of stakeholders. Competitive grants are made through the National Research Initiative, Higher Education, 1994 Institutional Research and Extension, and Integrated Programs. Formula-funded grants to land-grant universities, authorized by the Hatch Act, Smith-Lever Act, Evans-Allen Act (1890), and Cooperative Forestry Research Act (McIntire-Stennis Act), as amended, provide institutions a high degree of flexibility and autonomy. Special Research and Administration Grants are appropriated by Congress to accomplish site-specific projects. "Pass-through" funds from other government agencies are dispersed on a competitive basis for specific purposes, as authorized.

Agency NPLs encourage interaction across program lines within a type of funding as well as across different types of funding. The linkage between Markets and Trade, Public Policy, Farm and Ranch Management, Risk Management Education, International Development, and Trade Adjustment typifies that example. The Sustainable Agriculture Research and Education, Small Farms, and Ecosystems Management programs are all concerned with some aspects of marketing, trade, policy and development. Through these programs producers and land owners can capture the additional value they may create with environmentally friendly products and services. Bioenergy, Rural and Community Development, Small and Family-based Businesses, and Entrepreneurship programs depend, directly or indirectly, on the knowledge generated by this portfolio.

Portfolio's Linkage to CSREES Strategic Plan

CSREES Supported Goal:

This portfolio supports strategic goal 1: Enhance International Competitiveness of American Agriculture and strategic goal 2: Enhance the Competitiveness and Sustainability of Rural and Farm Economies. CSREES supports activities to enhance competitiveness and sustainability of rural and farm economies, ranging from the development of new products to improvements in productivity and financial management. Education programs strengthen the foundation for this goal by building capacity in the agricultural research and extension system and training the next generation of scientists and educators. A strategic plan for this portfolio will be developed and guided by the roadmap for Agriculture Economics and Rural Communities mandated by Title VII of the Food, Conservation, and Energy Act of 2008. It will include strategies similar to these listed here and those contained in the strategic plan of USDA, REE, and CSREES. These new strategies are:

- Support research, education and extension to 1) better understand and address consumer needs, tastes and preferences, 2) inform consumers, 3) provide continuing professional development throughout the agricultural and foods system;

- Sponsor analyses of the benefits and costs of agricultural, trade, environmental, and other policies to compare the effects of alternative production and management systems, and related topics;
- Expand research to assess the effectiveness of developing profitable alternative crops and on- or near-farm processing that add value to agricultural products and enhance the economic viability of rural communities and families, particularly socially disadvantaged farm operators;
- Expand research, education and extension to help producers, processors, and distributors address changing consumer needs, tastes, and preferences.

CSREES Supported Objectives:

This portfolio supports strategic objectives 1.1: Provide Research, Education, and Extension to Expand and Maintain International Export Opportunities; 1.2: Support International Economic Development and Trade Capacity Building; 2.1: Provide Research, Education, and Extension to Expand Domestic Market Opportunities; and 2.2: Provide Research, Education, and Extension to Increase the Efficiency of Agricultural Production and Marketing Systems. New markets are emerging for products made from agricultural and forestry materials, as well as markets for environmental activities and products that mitigate environmental concerns. CSREES sponsors research and development for new food and non-food products, services, and technologies, quality improvements, new uses, and value-added processes that enhance market opportunities for agricultural and forest products. Through extension and outreach, CSREES and its partners effectively demonstrate and transfer this knowledge to users.

CSREES Strategic Plan Key Long-Term Outcomes Table

<p>Key Long-Term Outcome: Expanded science-based knowledge and technologies to generate high-quality products, services and processes by: 1) increasing the knowledge of markets, trade, and policy of public and private decision makers; 2) creating new commercially viable and marketable alternative crops, products, services and alternative markets for non-food products from existing and alternate resources, and the traditional and existing commodities, crops and products that provide the bulk of the food and fiber supply; 3) identifying international opportunities and building linkages between U.S. and foreign institutions, and 4) establishing new integrated research, education, and extension programs and multi-disciplinary baccalaureate and graduate education training programs.</p>
<p>Performance Measure: Cumulative expanded knowledge and information through research, higher education and extension outreach to improve public and private decision making.</p>
<p>Performance Criteria</p> <p>Foster understanding of markets, productivity, agricultural competitiveness, and inter-regional trade and provide insight to the role and function of markets and their regulation (CSREES knowledge Area 603)</p>

Increase knowledge and understanding of distribution of products, goods, and services, the practices of buying and selling and development and improvement of markets (CSREES Knowledge Area 604)

Increase knowledge and understanding of economic components of international trade and development, trade performance of sectors of the U.S. economy, and that of other countries development impacts (CSREES Knowledge Area 606)

Increase understanding of economic and social impacts of domestic programs and policies, including the effect of government actions on the U.S (CSREES Knowledge Area 610)

Increase understanding of U.S foreign policy goals and policies that have been implemented (CSREES Knowledge Area 611)

Actionable Strategies

Sponsor analyses of the benefits and costs of agricultural, trade, environmental, and other policies to compare the effects of alternative production and management systems, and related topics;

Expand research to assess the effectiveness of developing profitable alternative crops and on- or near-farm processing that add value to agricultural products and enhance the economic viability of rural communities and families, particularly socially disadvantaged farm operators;

Expand research, education and extension to help producers, processors, and distributors address changing consumer needs, tastes, and preferences;

Provide technical assistance and training domestically and in developing countries to strengthen market infrastructure, market institutions, trade and investment, and supportive market policies;

Support research, education and extension to 1) better understand and address consumer needs, tastes and preferences, 2) inform consumers, 3) provide continuing professional development throughout the agricultural and foods system;

Provide technical assistance to help the U.S. and developing countries adopt rules-based and science-based policies and regulatory frameworks of international standards setting bodies;

Help raise agricultural productivity in a sustainable environment with applications of science and technology, including biotechnology, to boost food availability and access, and improve nutrition;

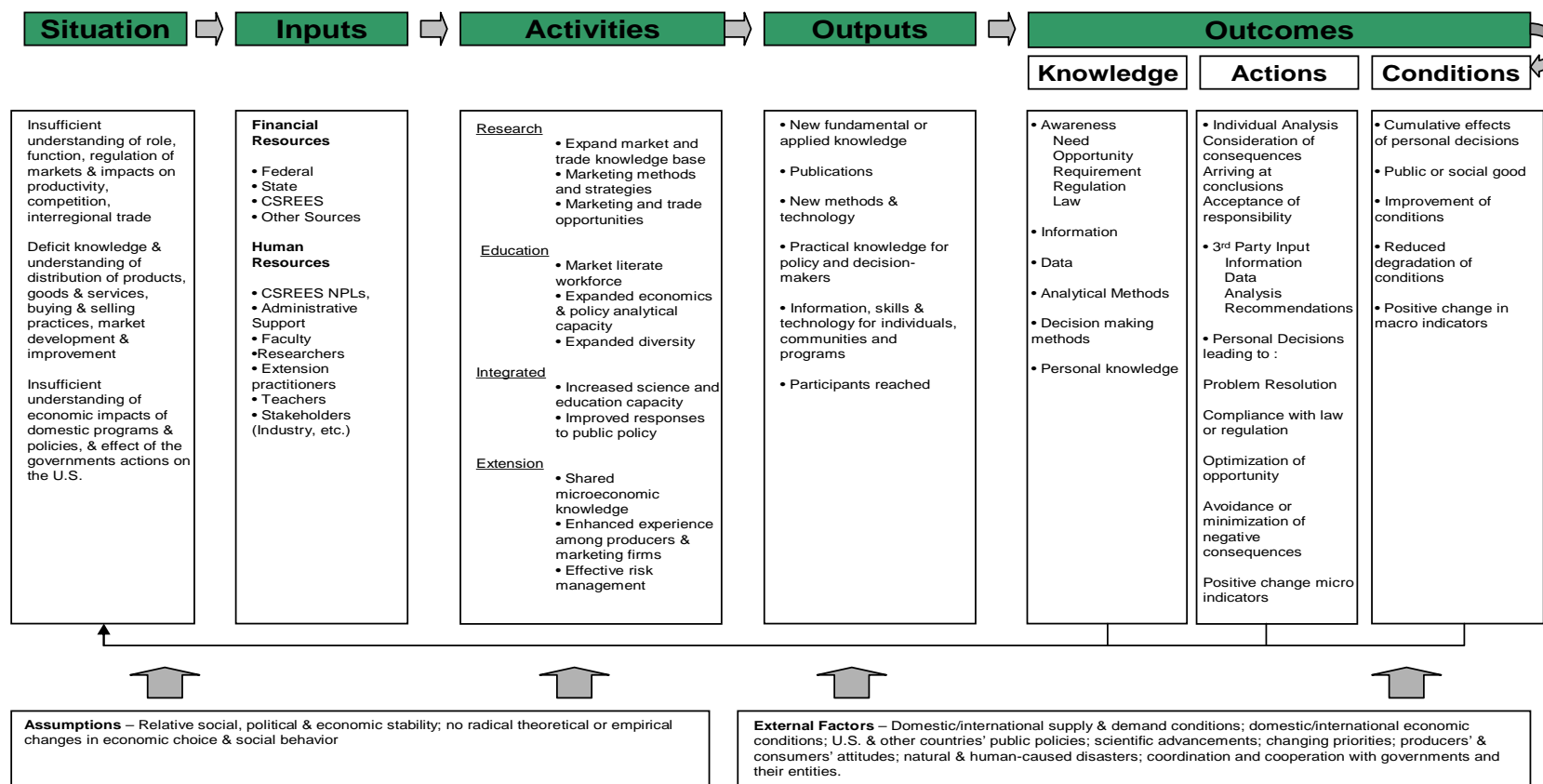
Continue to provide technical assistance to countries in agricultural, economic, and environmental reconstruction following armed conflicts or natural disasters and strengthen their capacity to mitigate future problems;

Focus existing research, and education programs to encourage new, innovative, and alternative uses for agricultural products, including biomass, biofuels and bioproducts;

Support the recruitment, retention, training, graduation, and placement of the next generation of research scientists, educators, and practitioners in the food and agricultural sciences;

Strengthen working relationships with other Federal agencies and departments to coordinate programs related to development of new markets for agricultural products and activities.

Portfolio: Markets, Trade, Policy and International Development



Portfolio Inputs**Portfolio Level Funding Table and Bar Chart**

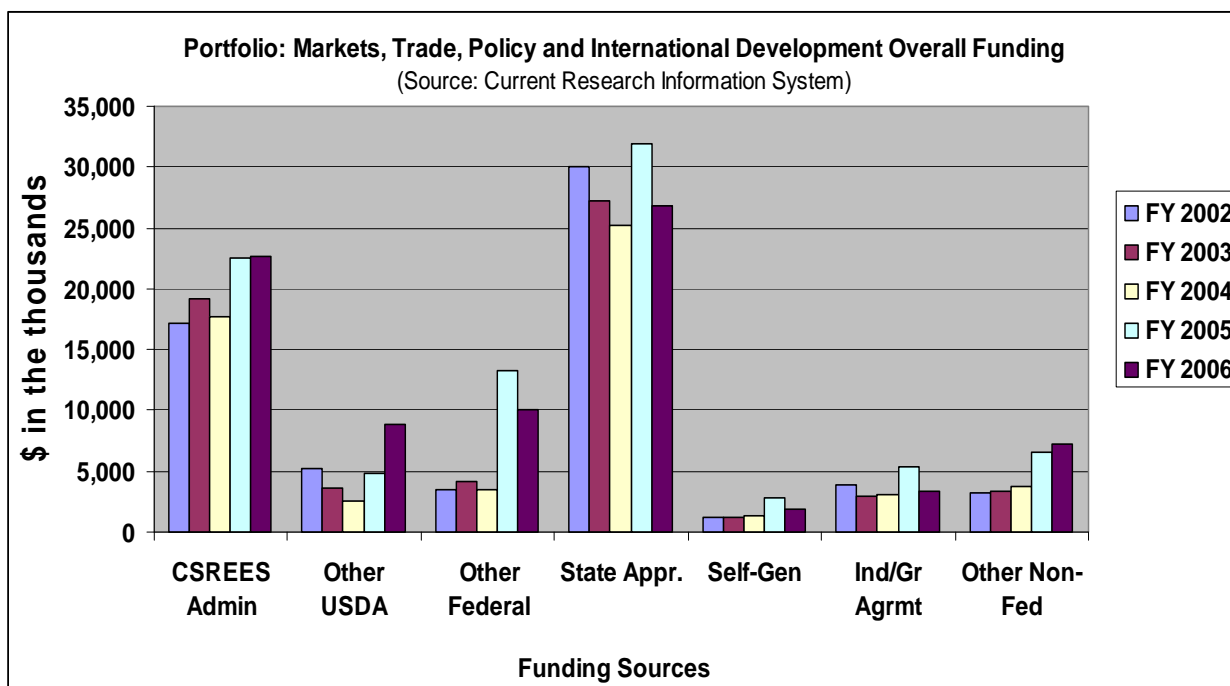
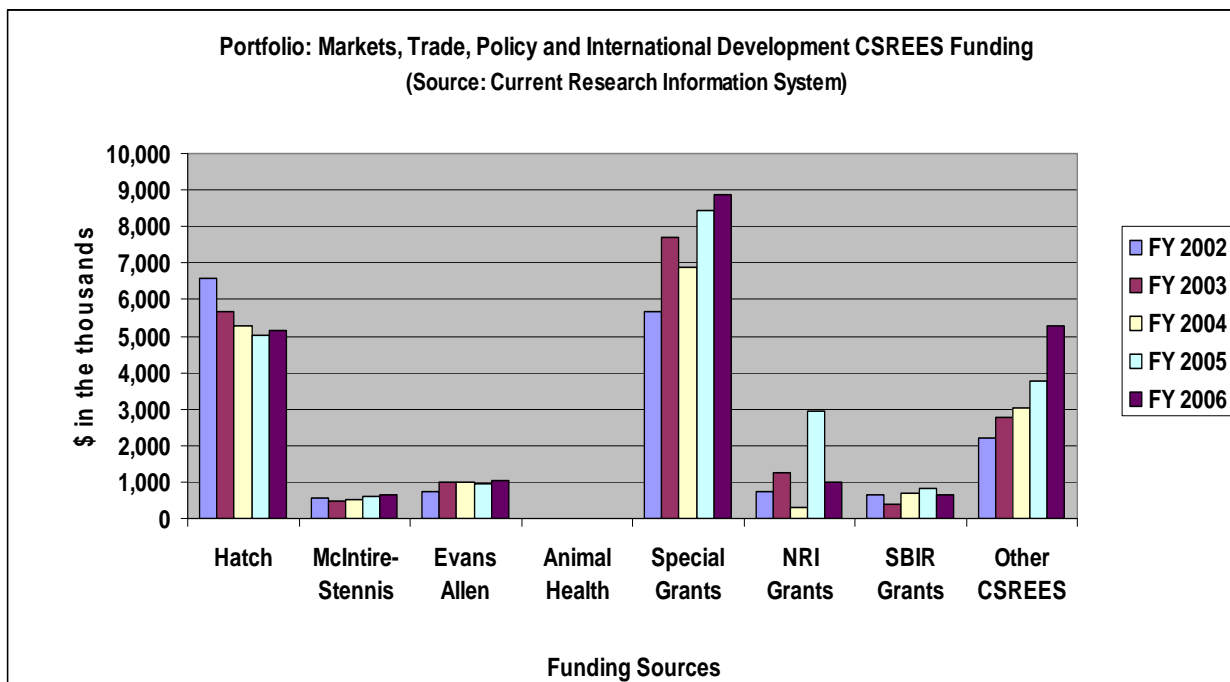
Unless otherwise noted, the source of information for the tables and charts in this section is the Current Research Information System (CRIS), which contains primarily research and education funding. With a few exceptions, extension funding by KA will not be available until FY 2007 funds are reported.

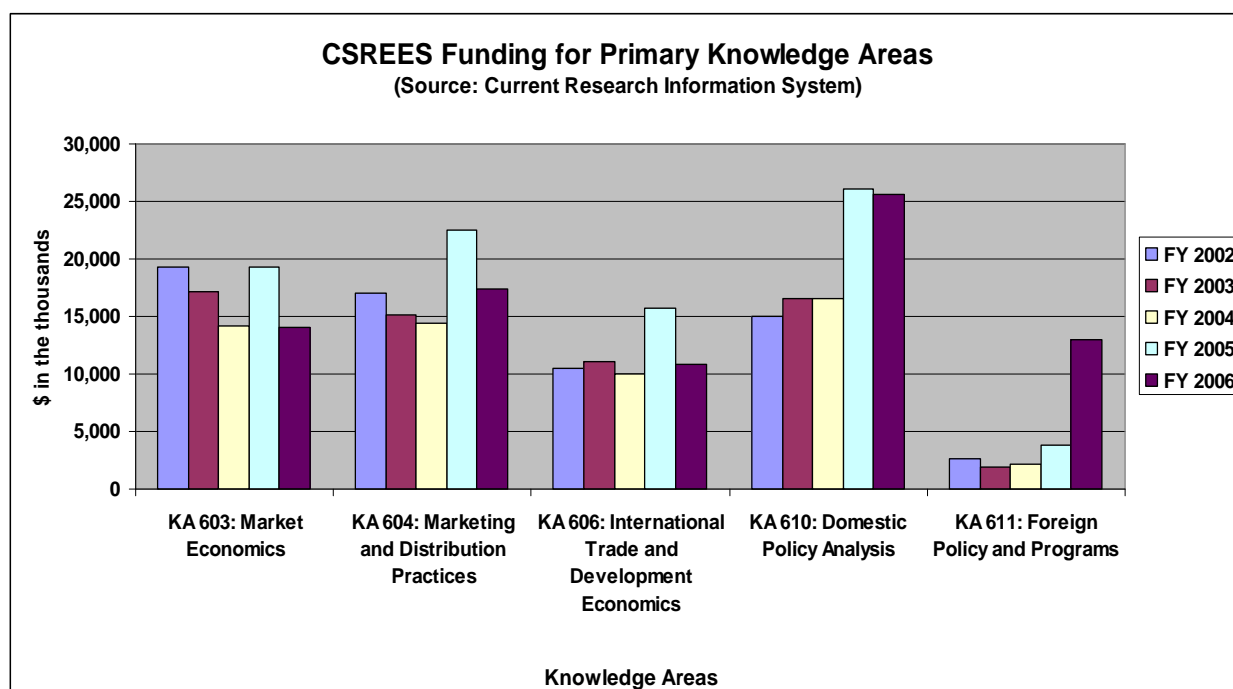
Public research, teaching and extension in agricultural and resources economics, in its entirety, depend very heavily on CSREES funding. Agency funded programs for economics, about \$50 million annually, is the largest single component of funding portfolio for the entire profession. It accounts for about one third of the total annual funding for markets and trade and a similar proportion for other economics and policy topics. Funding for International development comes primarily from sources external to CSREES. In most cases, such support is provided by the State Department/U.S. Agency for International Development. In 2007, this amounted to approximately \$6 million, the majority of that for the Iraq Agricultural Extension Revitalization (IAER) project. An additional \$2 million was appropriated last year for the agency's International Science and Education (ISE) competitive grants program.

Markets, Trade, Policy and International Development Summary Funding Table for Economics Knowledge Areas for Fiscal Year 2002-2006*						
Funding Source	(\$ Thousands)					
	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Grand Total
CSREES Funding	14,123	16,109	15,147	18,760	19,071	83,210
Non-CSREES Funding	37,093	32,618	29,994	49,005	37,898	186,608
Total Funding	51,216	48,727	45,141	67,765	56,969	269,818
Percentage of CSREES Funding	28%	33%	34%	28%	33%	31%

Source: Current Research Information System

* FY 2007 CRIS Funding Data will be Available in Late Summer 2008





However, this CSREES-funded portfolio is unbalanced and heavily dependent on formula funding (approximately 34 per cent), special grant congressional earmarks (approximately 26 per cent), and other (non-competitive) funding sources (approximately 25 per cent). All three of these funding sources are unstable and have, in recent years, been targeted for elimination by the administration or reduced by Congress. They are all chronically vulnerable to political uncertainty and policy adjustments¹.

In real (inflation adjusted) economic terms, the overall funding portfolio has not sustained itself over the past decade.

The economics profession has been encouraged to participate more aggressively in CSREES and other competitive funding programs, especially in NRI arenas beyond those traditionally sought – Agribusiness Markets and Trade, Rural Development, and Agricultural Prosperity for Small and Medium-Sized Farms. These three sources annually provide about \$10 million; but an additional \$50 million in annual funding that encourages economics-related proposals is included in programs such as Managed Ecosystems, Water and Watersheds, Air Quality, Human Nutrition and Obesity, Food Safety and Epidemiology and Biology of Weedy and Invasive Species. While not exclusively market and trade specific, these offerings reflect the highly integrated and multidisciplinary philosophy of the NRI, and, indeed, the Agency.

¹ The Food, Conservation, and Energy Act of 2008 contains several provisions that could substantially alter the funding and organizational structure of the Agency. Recent Presidential Budget Proposals have variously proposed eliminating formula-based research funds, transferring them to competitive programs, and substantially increasing the proportion of such funds dispersed for multi state research. Earmarked funds are never included in the administration budget proposal, and the U.S. Congress is increasingly restive with the scope and scale of its annual earmarks.

Although aggregate state funding for agricultural and resource economics (a breakout for marketing and trade is not available) is larger than CSREES funding for the same subject area, the amount of designated state funding available *to each individual state* is far less. Thus, CSREES competitive funding is the largest single source available to the profession as a whole. Changes mandated by the new Farm Bill include development of research road maps for major areas of USDA research focus (including agricultural economics) and the submission of a single, integrated budget line item for research to Congress. Active participation of economics National Program Leaders is required to ensure balanced integration of the physical, biological and social science portfolios to accomplish the USDA mission to provide leadership on food, agriculture, natural resources, and related issues based on sound public policy, the best available science, and efficient management.

Portfolio Results

These results emanate from work conducted through primary knowledge areas, secondary areas and key programs that make up this portfolio.

Portfolio Outcomes:

- Researchers conducted multiple NRI and Hatch funded studies to compare how the United States, competing countries, and importing countries grow, process, market, and distribute agricultural products and identified emerging trends and areas of unmet consumer demand. The project worked benefitted more than 900 Midwest agribusiness firms, exposed more than 250 clients to agricultural export assistance opportunities, and introduced international visitors to Iowa's agricultural technology, expertise and products.
- Research examined how food safety and quality issues related to red meat production impact the global competitiveness of U.S. products. NRI and Hatch findings were used by U.S. livestock and meat industries to make improvements in production practices, marketing and food safety best practices, thereby enhancing global the competitiveness of their products.
- NRI research on the economic interrelationships in the domestic and foreign food and agricultural industries from the farm gate to the international market sector. Evaluated factors in U.S. and abroad that influence trade prospects and patterns. Based on findings U.S. policymakers formulated their concessions in international trade negotiations (including the Doha round of WTO)
- Research investigated methods to improve economic opportunities in agriculture, food and natural resource sectors. Based on Hatch funded research findings, a state assisted 1,084 citizens and businesses with concept development, business planning, advanced business studies, assistance after start-up. The state helped launch 68 ventures (25 new firms, 43 business expansions) creating 430 direct jobs, invested capital totaling \$131 mil.; generated annual revenues of \$182 mil.
- Research identified opportunities for new products form existing crops, new crops, new uses for agricultural by-products, and new methods for doing agricultural related business. Hatch funded research findings helped launch 7 new food products businesses; Created 2 0 jobs; 2

new markets provide 25 farms with locations to sell products; Five energy conservation projects at food processing establishments identified \$100,000 average energy savings.

- Research investigated the role of non-prices and non-income information plays in shaping demand for food, the response of agribusiness to these changes in demand, and the implications for production agriculture. The NRI funded study demonstrated how consumers respond to changes in food labeling and media coverage related to genetically-modified food products.
- Using Hatch multistate funding, researchers used industrial organization methodology to analyze performance in different industry sectors. Accounting for demographics, store characteristics and market conditions, supercenters decreased prices by 6% to 7% for national brand goods and 3% to 8% for private label goods.
- Approximately 75 partially Hatch-funded interactive web-based marketing information, methods, and information sites are maintained by agricultural economists from CSREES constituent institutions; while a cumulative count is not available, these sites receive millions of visits and several hundred thousand downloads annually. See <http://www.csrees.usda.gov/ProgViewRelated.cfm?prnum=9866&lkid=5>

Portfolio Leadership and Management:

This portfolio has undergone considerable transformation over time. In the past it benefitted from the services of multiple NPLs (livestock marketing, grain marketing, agricultural policy, trade). With attrition and retirements, human capital has changed as the focus from commodities and products has expanded toward public and private decision making as constrained by economic, policy and regulatory and legal realities.

The focus of the three mission areas has similarly evolved. Research is more comprehensive, including focus on value chains to better define market functions and activities, and their implications for all market participants, be they public, private, emerging or alternative. Higher education has focused on agricultural business, rather than price analysis, and extension outreach on decision making, with equal focus on avoiding poor decisions and errors of omission, as on making sound and economically justified ones. The merger of marketing, policy, and trade and development portfolios makes efficient use of existing resources and improves coordination of these highly integrated activities.

Programmatic or Management Shortcomings

The shortcoming of this portfolio is limited human capital for leadership. However, NPLs are highly active within the profession. Both the NPL for competitive programs and the programmatic NPLs made excellent progress in Agency integration. The hiring of a NPL for Farm Financial Risk Management (an agricultural lawyer) has considerably broadened the scope and scale of our leadership in management, marketing and policy. The inclusion of legal aspects of production, entrepreneurship and marketing is a substantial benefit to the Economic and Community Systems (ECS) unit and to the support of the Agency and USDA missions.

NPLs work hard to maintain considerable visibility within the profession. Evidence of the latter is apparent in requested presentations and symposiums, and service to professional organizations including American Agricultural Economics Association., regional associations, and USDA.

- Working with international, national and regional economics professional associations has paid dividends. CSREES National Program Leaders have increased the awareness of the profession of the opportunities that are available to these stakeholders. Targeting department heads and young faculty increased interest by the profession and made them become actively engaged in the competitive grants process. An example of this new level of engagement led the president of the Southern Agricultural Economics Association to alert the membership to key individuals within CSREES
 - Please contact Siva Suresh Sureshwaran (USDA CSREES National Program Leader, Competitive Programs) if you are interested in reviewing proposals for the traditional social science program areas or if you are interested in helping but not sure which program is the best to contact. Contact Suresh at (202) 720 7536 or ssureshwaran@csrees.usda.gov.
 - Contact Diana Jerkins (USDA CSREES National Program Leader, Competitive Programs) if you are interested in reviewing proposals for Managed Ecosystems RFAs. Contact Diana at (202) 401 6996 or djerkins@csrees.usda.gov.
 - Please contact Michael A. Bowers (USDA CSREES National Program Leader, Natural Resources and Environment) if you are interested in reviewing proposals for Biology of Weedy and Invasive Plants programs within the NRI. Contact Michael at (202) 401 4510 or mbowers@csrees.usda.gov.

He also encouraged his membership to contact other Program Leaders throughout the RFA season to ascertain their interest in serving as a reviewer on any program. He brought it to their attention that serving as a reviewer “will help you with future grant applications by better understanding the process. Serving as a reviewer can also benefit the profession through having more economists on panels.”

Another reminder, the NRI deadline for applications for the Small Farms program is June 4. <http://www.csrees.usda.gov/fo/smallfarmsagriculturalprosperitynri.cfm>

Portfolio management has not been verified as a problem. There does not appear to be any evidence of any policy, procedural or programmatic deficiencies in the competitively funded, formula based, or special programs.

Key Future Activities and Changes in Direction

Passage of the farm bill influenced the scope of marketing, policy, possibly international trade and development activities, subject to the appropriation of funds by Congress and the outcome of the CSREES transition to the National Institute for Food and Agriculture.

Several focal areas can be identified:

- Policy impacts of the 2008 Farm Bill
- Resolution of a global trade agreement
- Changes in the food marketing value chain
- Market based environmental services
- Increased work in experimental and behavioral economics.

What are Others Doing

Agricultural Marketing Service is part of the USDA Marketing and Regulatory Programs (MRP) mission area. MRP agencies facilitate the domestic and international marketing of U.S. agricultural products and ensure the health and care of animals and plants. MRP agencies are active participants in setting national and international standards.

The Agricultural Marketing Service (AMS) Science and Technology Program lends centralized scientific support to AMS programs, including laboratory analyses, laboratory quality assurance, coordination of scientific research conducted by other agencies for AMS, and statistical and mathematical consulting services.

The AMS Transportation and Marketing Program brings together a unique combination of traffic managers, engineers, rural policy analysts, international trade specialists, and agricultural marketing specialists to help solve problems of U.S. and world agricultural transportation., provides better quality products to the consumer at reasonable cost, improves market access for growers with small-to medium sized farms, and promotes regional economic development.

The Foreign Agricultural Service Market Access Program (MAP) uses funds from the Commodity Credit Corporation (CCC) to help U.S. producers; exporters, private companies, and other trade organizations finance promotional activities for U.S. agricultural products. Each year, MAP helps launch and expand sales of U.S. agricultural, fish, and forest products overseas. All regions of the country benefit from the program's employment and economic effects from expanded agricultural export markets.

Emerging Markets Program (EMP) is another Foreign Agricultural Service program that provides funding for technical assistance activities to promote exports of U.S. agricultural commodities and products to emerging markets. Its resources may be used to support exports of U.S. agricultural commodities and products only through generic activities. The principal purpose of the program is to assist U.S. organizations, public and private, to improve market access by developing, maintaining, or enhancing U.S. exports to low- and middle-income countries which have or are developing market-oriented economies, and which can be viable markets for these products.

The Foreign Agricultural Service (FAS) international development programs explore trade and investment opportunities (ex. agribusinesses between U.S. and East African), assist with rebuilding agriculture and food security with Iraq and Afghanistan, resources for disaster assistance and food assistance, and they lead the USDA in trade capacity building efforts. FAS supports cooperation between American and foreign researchers through activities directed at potential threats to U.S. agriculture and forestry, development of new technologies, and enhancement of agribusiness and trade in foreign markets.

U.S. Agency for International Development (USAID) supports research, education and outreach through the Collaborative Research Programs (CRSP). The CRSPs utilize the expertise of U.S. universities in low-cost, high-impact programs that contribute knowledge, trained personnel, and technology to agriculture worldwide in the fight against hunger and poverty. CRSP has nine programs funded by USAID and other collaborating organization focus research upon crops, including beans and cowpeas, sorghum and millet, and peanuts.

USAID funds research grant programs to promote development-focused technical cooperation among Middle Eastern countries, and the utilization of U.S. and Israeli expertise by developing countries. The Middle East Regional Cooperation (MERC) Program and the U.S.-Israel Cooperative Development Research (CDR) Program both fund competitively reviewed, applied research projects. CDR supports joint research projects involving U.S. and Israeli scientists working with counterparts in developing countries in Africa, Asia, and Latin America on topics relevant to the needs of the developing-country partners.

USAID supports one of the most important organizational vehicles for conducting global/international/regional research has been the Consultative Group on International Agricultural Research (CGIAR). The CGIAR is an informal group of donors (about 60 at present) which has its headquarters at the World Bank in Washington. It sponsors 16 international research centers distributed throughout the world (13 in developing countries). In addition, the CGIAR is currently sponsoring a Challenge Program which is designed to tackle problems of global and regional importance and that bring a wide variety of researchers together. An example of USAID support of international programs include a farmer-to-farmer (FTF) program which provides voluntary technical assistance to farmers, farm groups, and agribusinesses in developing and transitional countries to promote sustainable improvements in food processing, production, and marketing.

The World Bank has numerous research projects in international trade. The Bank has contributed significantly to the development of techniques and policy tools for analyzing the impact of trade policy reforms. However, their international research program is focused on migration and international development.

The Forest Service Policy Analysis & Development staff works to ensure that domestic and international forest policy positions taken by the U.S. reflect the best interests of the world's forests and the nation's forestry community.

The Economic Research Service (ERS) economists analyze the implications of policies in the United States and abroad for U.S. and global agriculture.

The Agricultural Research Service (ARS) manages domestic and overseas laboratories and facilitates international research activities. The research serves to address the facilitation of mutually beneficial agricultural research.

The International Food Policy Research Institute (IFPRI) has research and outreach programs in agriculture and rural development, capacity strengthening, environmental, natural resources, health, diet, nutrition, market and trade. They also have country and regional research programs.

Section II: Primary Knowledge Areas

KA 603: Market Economics, and KA 604: Marketing and Distribution Practices

Introduction for KA 603

Market Economics focuses on the understanding of markets, productivity, and interregional trade, and gives insight to the role and function of markets and their regulation, primarily from the macroeconomic (industry) perspective. Topics include: market performance; economics of processing, storage, and transportation; regulation and protection of markets; marketing and pricing systems; institutions; local, regional, and national trade patterns; supply and demand; price analysis; and grades and standards.

Introduction for KA 604

Marketing and Distribution Practices concerns the distribution of products, goods, and services, the practices of buying and selling, and the development and improvement of markets primarily from the microeconomic (firm) perspective. Topics include: improvements in the procurement, marketing and distribution of products, goods, and services; development of domestic markets; direct marketing, alternative markets, and niche marketing; electronic commerce options for producers; group action, bargaining, and cooperatives; marketing orders; futures and options markets, cash and forward contracts, and other existing and emerging marketing and pricing arrangements; and effectiveness of alternative marketing structures.

Key KA Activities for KAs 603 and 604

- University of Tennessee, Tennessee State University biomass classification method is useful in feedstock selection for a bioconversion plant, and as a powerful tool in managing varying stocks of biomass by providing rapid classification without lengthy and costly wet chemical analysis.

- New York research verified the benefits of export promotion programs in terms of enhancing producer welfare are much greater than costs of the programs; benefit cost ratios show direct effects of U.S. rice, wheat and sorghum export promotion is benefiting grain producers
- Washington results include a cost-effective fiberboard product from wheat straw; new preservation technology for fruits and berries; a mechanical harvester for sweet cherries; cost-effective production of Omega-3 fatty acids from cull potatoes; development of a new class of Hard White Wheat to produce bread and noodles for the Asian market; new tests for measuring safety of food products and for E. coli contamination; and high-pressure thermally sterilized vegetables and others.

Key KA Outputs for KAs 603 and 604

- Missouri Extension Business Development program created curriculum, tools, and educational offerings specific to marketing. New marketing research tools were added, offering Business Development Specialists the ability to create invaluable market research, demographics, and marketing resources for their customers. Businesses served were offered access to market research and demographics that are too costly to access in the private market. Communities were offered market research and assisted in creating economic development plans, and make educated decisions.
- Iowa Food chain analysis implemented the ISO-9000 quality management system (QMS).
- North Carolina A&T SU outdoor hog program worked with NCSU, local extension and through the collaborative project NCChoices in this area.
- Iowa analysis of 20,000 lots of feeder cattle sold at 9 auctions found buyers paid premiums based on amount and source of information.
- Maine examined broader food shopping behavior and preferences and identify niche opportunities for small local grocers to attract and maintain a customer base.
- West Virginia research verified optimal bucking system for Appalachian hardwood could increase value.
- Over 1,587 Missouri businesses were offered training and counseling, and business planning was a key focus of all training and counseling.

Outcomes for KAs 603 and 604

- Missouri businesses increased sales and government contracts by over \$102 million.
- An Iowa grain firm increased profitability by \$220/railcar shipped as result of inventory control QMS system; Created 10 internal auditor jobs, 2 quality manager jobs; Feedlots and cowherds earned \$25/head premiums providing verified age, & source info.

- One North Carolina market alone reports a tripling of vendors selling meat products in the market (from 5 to 16) in the past 2 years. Increases in the price being offered for grain especially organic of \$7.00- \$10.00 bu. Several large scale buyers are looking for pork that is raised according to Outdoor hog production standards of treatment, nutrition, and health. One buyer alone purchased \$1,000,000 worth of pork raised in that way.
- Compared to no weaning and/or vaccination info., Iowa buyers paid premiums of \$2/cwt for seller claims, to over \$6/cwt for 3rd party certified claims; comparison of single-source cattle to backgrounded mixed source showed feedlots should discount backgrounded cattle approx. \$8/head vs. single-source cattle.
- In Maine 40 small grocers developed business plans to improve economic viability and potential for continued operation; 2 producer groups formed to examine opportunities to work with local retailers to market product.
- West Virginia hardwood producers increased value 26% to 43% per stem; the rate of return for merchandising pulpwood logs sawn at 25, 30, 35, 40 dollars/ton ranged 10% to 39%.
- Oregon Growers increased their profit by growing alternative varieties. During a four-year period, growers received over \$3.2 million more per year on average than they would have if they had not converted to these new varieties.
- Missouri businesses were able to access over \$23 million in investments through business planning and presentation to funders.

KA 606: International Trade and Development

Introduction for KA 606

International Trade and Development focuses on the economic components of international trade and development, trade performance of sectors of the U.S. economy and that of other countries, globalization, barriers to trade, and trade and development impacts, especially as it relates to policy decisions. There is a strong focus on the global market economy, specifically the interaction between domestic and international market economies.

Key Outputs for KA 606

- Texas A&M University examined how food safety and quality issues related to red meat production impact the global competitiveness of U.S. products during a period of increased international scrutiny and import restrictions from traditional U.S. customers due to concerns about mad cow disease.
- Iowa State University compared how the U.S., its export competitors and importing countries grow, process, market, and distribute agricultural products. Emerging trends and areas of unmet consumer demand were identified.

- West Virginia University identified ways to enhance global competitiveness of Appalachian hardwood industries by promoting the quality and efficient use.
- Iowa State University research on the economic interrelationships in the domestic and foreign food and agricultural industries from the farm gate to the international market sector. Researchers evaluated factors in U.S. and abroad that influence trade prospects and patterns.
- U.S. policymakers formulated their concessions in international trade negotiations (including the Doha round of WTO) based on Texas A&M research.
- Utah State University investigated the role that non-price and non-income information plays in shaping the demand for food, the response of agribusinesses to these changes in demand, and the implications for production agriculture.
- University of Wisconsin developed strategic assessments of demand and supply needs for the pulp and paper industry, including competitive and trade analysis, especially how the impact globalization has on forest product industries that will influence forest management plans and future marketing of U.S. forest products.

KA 610: Domestic Policy Analysis, and KA 611: Foreign Policy and Programs

Introduction for KA 610

Domestic Policy Analysis provides an understanding of the effectiveness and the economic and social impacts of domestic programs and policies. Emphasis is on the long-term effects of government actions that influence the development and implementation of policies. Topics include: impacts and implications of macroeconomic policies; agricultural production, price, and income policy, including commodity programs; antitrust and market policy; consumer policy; natural resource policy; rural development policy; science, research, and education policy; and public policy education.

Introduction for KA 611

Foreign Policy and Programs focuses on U.S. foreign policy goals, assessing the effectiveness and impacts of implemented policies and the interactions between foreign and domestic policies, and global implications.

Key Outputs for KAs 610 and 611

- The Center for Agricultural and Rural Development, Food and Agricultural Policy Research Institute, Rural Policy Research Institute, International Food Policy Research Institute, Food Policy Institute, Agricultural Marketing Policy Center, Food Marketing Policy Center and similar facilities develop models that analyze changes and reforms in agricultural and trade policy for temperate products in the U.S. and other major countries. They address the uncertainty in prices and output in agricultural markets through models that forecast price and quantity produced, traded, and consumed for all major temperate crops and live stock in world markets. These policy research activities provide information to the House and Senate authorizing

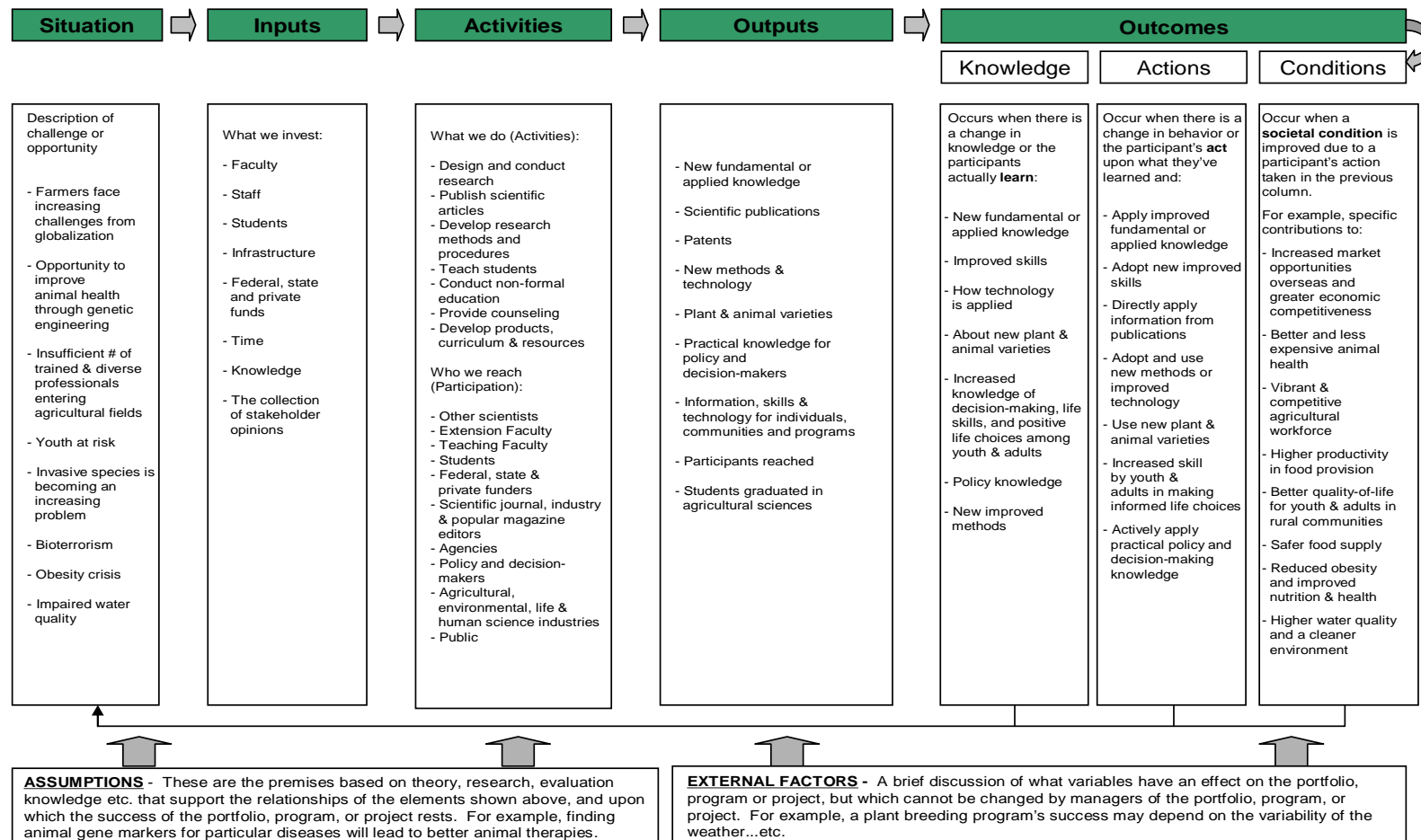
committees, USDA, and other agencies that have jurisdiction over agricultural and trade policy. Public policy and legislation never include bibliographies of inputs and data so it is not feasible to report the direct impact of their influence on specific policies and laws. However, their continued existence and continuous funding is evidence of their value to the legislative branch.

- The Ohio Center for Farmland Policy Innovation developed and conveys information on performance of rural zoning, easement, purchase and other land policy options. The center conducts policy experiments in the field to determine what methods might be helpful in resolving issues on farm land use.
- The Oquirrh Institute Center for Environmental Management creates approaches that improve environmental quality, sustainable growth and stewardship. It addresses the need tools beyond regulation that will improve environmental outcomes while at the same time keeping agriculture and rural America economically viable.
- Cornell University New York City Program Garden Mosaics and Urban Agriculture focuses on food security, sustainable horticulture, and nutritional health. The program is implemented through community based participatory environmental and horticultural science education, nutrition and food systems outreach, establishment of new and/or expanded community garden stands and markets, and conducting related community service actions. It engages local residents, including educators and gardeners, and the youth they serve, in participatory science learning, internships and local actions in limited resource communities, where food security and nutritional health are of greatest concern and sound approaches to sustainability are essential.
- The Food and Agriculture Policy Research Institute (FAPRI) conducts research on the economic interrelationships in the domestic and foreign food agricultural industries from the gate to the international market and to develop and maintain an analytical support system to encourage and facilitate research and analysis on agricultural trade and policy issues. This project evaluates supply, demand, and policy factors in the US and abroad that influence trade prospects and patterns over time, provide information to help public policy participants and decision makers, and evaluate trade and policy issues and to increase public understanding of these issues.
- Cornell University and Texas A&M University collaborated to form a national Institute for livestock and dairy policy. This program leads in the area of dairy policy and dairy market analysis and extension to provide neutral and objective analysis of the consequences of alternative government policies on the dairy industry and the economics of dairy markets more broadly. The program serves all interested clientele but has special focus on providing policy information analysis to policy makers in Congress and USDA. To meet the demands by Congress for farm level policy analysis of alternative policies, researchers develop farm level policy analysis models capable of analyzing the impacts of alternative government policies on the economic viability and competitiveness of representative farms in alternative regions.

- University of Missouri and Arizona State University collaborate on the role of the fruit and vegetable sectors in overall net farm income. Researchers use econometric models to develop long-term projections on supply and utilization for the major commodities in the US fruit and vegetable sectors. Projections of producer revenue are integrated in the net farm income projections. US Fruit and Vegetable Outlook Report projections on supply and utilization of fruits and vegetables for 10 years.

KA 610 and 611 Outcomes

- Producers attending in-depth workshops were taught the information needed to improve their risk management skills, and increase their economics returns. Post-participation survey results indicated participants increased understanding of risk management tools, increased their willingness to use new tools and analysis, and felt that they had increased their income by an average of \$37,536 relative to how they would have performed before going through the program.
- State researchers assessed the local biodiesel industry for 2 years. Assessment results indicated that the state had less than ten facilities producing biodiesel, and 39 biodiesel stations. Capital costs are similar for various feedstocks, but feedstock costs vary, and are the largest part of production costs. Per gallon biodiesel costs are about \$2.98 (soybean oil), \$1.67 (yellow grease), and \$3.35 (canola oil) vs. about \$1.56 (petroleum). Researchers projected the impacts of a mature cellulosic industry. By 2025, the local economy might increase by \$13 billion with the development of a reliable cellulosic feedstock and conversion to energy industry, providing 2.3 billion gallons of ethanol and nearly 40 billion kWh of electricity. The impact analysis of cellulosic ethanol helped secure \$70 million in state funds to construct a pilot plant. The estimated economic impacts of the industry have been presented widely in 2007 and cited by industry, academics, President Bush, and presidential candidates. The information was used by groups like the 25x'25 organization to move a resolution through congress affirming the goal of 25% renewable energy by 2025.

Logic Model for KA 610:**Knowledge Area 610**

Section III: Secondary Knowledge Areas

Introduction:

The management decision knowledge areas include most of the social sciences². They are by nature broad, and thus touch most strategic goals and objectives. Perhaps the most directly specific KAs to the Marketing and Trade portfolio and their accomplishments are listed and described below:

KA 601. Economics of Agricultural Production and Farm Management

- Focusing on 22 farm units that had completed their personal estate plan multiplied by the FINBIN non-farm balance sheet asset value of \$177,156, the total financial impact is \$2.6 million or \$4,918.76 per participant. Total financial impact of the program, combining the farm transition and estate planning asset portions from the 178 survey respondents, is \$220.5 million or \$420,726.07 per the 524 program participants.

KA602. Business Management, Finance, and Taxation

- The Northeast Center for Risk Management Education (RME) provided \$17,057 to the Pennsylvania State Cooperative Extension, southeast region. “Marketing Directly to Consumers” reached 683 producers with information concerning marketing, increasing farm net revenue from retail marketing, increased use of diverse markets and identification of new value-added enterprises for the operation. 683 total retail farm market participants operating in CT, DE, MA, MD, ME, NC, NJ, NY, PA, VA and VT attended this 4 day retail farm marketing conference. Components of this conference included 5 hands-on workshops, 41 concurrent educational sessions, retail farm market tours, industry specific trade show with 53 vendors and casual round table discussions.

KA 605. Natural Resource and Environmental Economics

- A new technique for estimating the economic impacts of hurricanes to coastal fishing infrastructure was developed. The new method allows for a more rapid and spatially precise estimate of damages to fisheries infrastructure. During 2007, the results of this assessment provided the basis for more than \$200 million in funding for fisheries recovery in Louisiana. Several applied research projects have been developed to examine the economic aspects of Louisiana's wetland restoration and preservation initiatives. Results indicate that in recent years restoration agencies have begun to abandon economic metrics in favor of more subjective, political criteria for project selection (e.g. project type, location, and sponsor). The net result of this trend has been an increasing loss of program efficiency in the allocation of nearly \$1 billion in

² The CRIS Manual of Classification for Agricultural and Forestry Research, Education, and Extension lists the social and behavioral fields of science as Anthropology, Economics, Education, Information and Communication, History, Law, Political Science, Psychology, Sociology, Sensory Science (human senses), Management, Art and architecture, and Landscape Architecture.

project spending since 1991. This research result demonstrates the loss of public funds when decision making does not conform to science-based recommendations.

KAs 607 and 801. Consumer Economics and Family Resource Management

- About 1150 Extension professionals (250 farm management; 900 financial security) increased knowledge about integrated farm and family finance educational programs. Annie's Project gained national Extension exposure and expects an increase of participation from 17 States to 25 States reaching 2500 women with programming in 2008. Achievement of this projection will give Annie's Project a total of over 7300 participants since 2003. CSREES leadership identified a strategic focus of farm succession and estate planning where Farm Management and Financial Security professionals, along with agricultural lawyers, can work in local teams.

608. Community Resource Planning and Development

Researchers at multiple institutions acquired new knowledge about rural labor markets, relevant to rural labor policies.

Socially disadvantaged farmers enrolled in USDA programs including EQIP and FSA loans; socially disadvantaged farmers in Alabama accessed \$1,879,750 in new loans and program support, resulting in improved economic conditions.

Policy makers considering the Community Reinvestment Act are equipped with new policy information about incentives inherent in the rural banking and finance industry.

New knowledge about using waste agricultural fibers to improve the characteristics of recycled plastics will be incorporated into plastics manufacturing processes, and anticipated increased income for farmers selling waste fiber (straw) for the manufacture of recycled plastics; establishment of plastics manufacturing businesses in rural areas.

KA 608, Rural Development, Funded Projects Linked to Markets, Trade, Development or Policy, 2007	
Theme	Number of projects
Land use	20
Well-being/quality of life	19
Rural labor markets	16
Entrepreneurship	16
Rural Amenities	14
Tourism	15
Population out-migration	10

609. Economic Theory and Methods

Given the purpose of this KA to support and expand theories and methodologies that ultimately improve the reliability and validity of research, the logical measure of output is the peer reviewed or juried publications that emerge from the funded work. The projects summarized below had an average publication rate of slightly over 34 publications over the lifetime (typically 5 years) of the project. No attempt was made to review or rank publications by journal quality or other quantitative means.

The preferred measure of direct outcome and impact, adoption and refinement by other researchers, is accomplished through tracking citations. Budget and technological constraints currently make this impossible, and the long lag periods associated with the life cycle of research would require expensive time series tracking and comparison for every project for years after its termination.

Specification of a broader long term impact measure is even more elusive for economics research, as this work rarely results in patents, commercial products, or intellectual property rights that can be tracked by copyrights or other measurable means. While all of the projects summarized here included impact statements in their reports, these generally focused on the nature of the research and the problems or opportunities that the work addressed, rather than on the theoretical or methodological basis of the research, *per se*.

A number of projects with policy focus listed informing and documenting information for federal and state government as impacts, but legislative work never includes citations so true, direct impact is impossible to quantify. Even in cases of policy work, the transfer of results and knowledge to stakeholders rarely includes much focus on methodologies or theoretical frameworks.

Section IV: Portfolio External Panel Recommendations

RELEVANCE

Scope

Agriculture, Markets and Trade Panel Recommendation

The wide variety of projects exceeds expectations, but the declining number of undergraduate and graduate degrees awarded in agricultural economics, and declining number of degrees awarded to domestic Ph.D. students in agricultural economics may inhibit future research capacity.

The number and types of projects meets expectations, but the scope in (international) development assistance projects is very limited.

International Economic Development's Panel Recommendation

The number and types of projects meets expectations, but the scope in development assistance projects is very limited. (Scope) The declining number of undergraduate and graduate degrees awarded in agricultural economics and the declining number of doctoral degrees awarded in agricultural economics may inhibit future research capacity. (Declining Numbers)

- *Markets, Trade, Policy and International Development's 2008 Response:* Agency NPLs work hard to maintain a broad, relevant portfolio. The portfolio contains a total of 549 active marketing and distribution projects, 175 active international trade and development projects, 410 active domestic policy projects, 80 active international policy projects, 30 Multistate Research Committees, and 2 Regional Extension Committees. This work covers a very broad spectrum to improve and expand basic and empirical marketing, trade, international development and policy related knowledge about agricultural, forestry, natural resource and related products and services to public and private constituencies, CSREES administers the competitive Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship Grants Program.

Working in collaboration with USDA's Foreign Agricultural Service, CSREES continues to broaden its international development activities. This past year, the agency partnered with a university consortium led by Texas A&M University to help revitalize agricultural extension in Iraq. In addition to training more than 400 Iraqi agriculturists during the year, the Iraq Agricultural Extension Revitalization (IAER) project engaged more than 50 U.S. university faculty members.

In 2007, CSREES continued to play a leadership role in the U.S.-India Agricultural Knowledge Initiative (AKI) that is focused on building human and institutional capacity, promoting sustainable use of water resources, effectively applying biotechnology approaches, and ensuring strong markets and processing chains. CSREES is also collaborating with India's National Institute of Agricultural

Marketing (NIAM) on the Structuring Agricultural Marketing Systems project. The agency is providing training for NIAM staff in developing grades and standards, food safety, cold storage, and cold chain management.

CSREES International Programs office also utilized university expertise for projects sponsored by FAS, the State Department, and the Millennium Challenge Corporation. The office further promoted the internationalization of U.S. universities through collaboration with FAS' Cochran, Borlaug, and Faculty Exchange Programs.

The scope and scale of international development assistance projects is indeed limited by funding, and the broader role that other government agencies play in directing, funding and coordinating assistance projects. Without substantial changes in legal authorities and funding authorizations this situation is not expected to change in the near future.

Higher education funding is focused national needs for future Ph.D. economists who will work in emerging areas such as energy economics and valuation of environmental services; the baccalaureate and M.S. focus also includes preparation of students for agricultural business. Recruitment of female and minority students, and those from minority-serving institutions, continues to be important within the agricultural economics profession.

Degrees Awarded in Agricultural Business and Management Areas at Reporting Institutions, 2001 – 2007					
Graduation Year	Associate	Baccalaureate	Masters	Doctorate	Total
2001-2002	37	2699	334	108	3178
2002-2003	29	3066	450	101	3646
2003-2004	85	2652	374	81	3192
2004-2005	190	2272	366	79	2907
2005-2006	60	2227	335	64	2686
2006-2007	58	2504	266	102	2930

- *Agriculture, Markets and Trade's Portfolio Response in 2007:*
CSREES administers the competitive Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship Grants Program for graduate degree programs and postgraduate training to develop intellectual capital to ensure the preeminence of U.S. food and agricultural systems. Fellowships support students with a stipend and a cost-of-education allowance to the institution. In FY 2005 CSREES received 73 applications requesting \$15.2 million, and made 39 awards totaling \$5.672 million to support 22 Master's and 75 Ph.D. fellows.

A number of exciting new international opportunities arose in 2006. A Presidentially-announced initiative to rebuild higher education partnerships between US and Indian agricultural universities was fully launched. The Agency played a lead role in designing this US-India Agricultural Knowledge Initiative (AKI) with active involvement of the Land Grant community. As guided by a Board of senior American and Indian government, academia and private sector officials, the AKI is updating

and re-energizing traditional relationships that will provide both countries with needed expertise, insight and trained future leaders. The Agency was also asked by the Secretary to launch a program to help rebuild the Iraqi extension system. Using funds from the Department of State, CSREES partnered with USDA's Foreign Agricultural Service to design a relevant program. Texas A&M University was competitively awarded funding to lead a consortium of US Land-Grant universities (Utah State University, Washington State University, New Mexico State University, the University of California at Davis, Prairie View University and Dine Tribal College) in the implementation of the Iraq Agricultural Extension Revitalization project. The Agency also participated in high level discussions with Pakistani officials which resulted in the Joint Committee on Science and Technology emphasizing the ongoing need to enhance mutually beneficial programming in agriculture, alternative energy, nutrition, food safety, water resources and veterinary sciences. In all of these programs, the Agency facilitates the active involvement of the US Land-Grant community. In so doing, campus-based programs are further internationalized, and ultimately, American agriculture is enhanced.

National Needs Graduate and Postgraduate Fellowship Awards Economics and Related Social Sciences, 2006	
Title	Institution
A Proposal to Meet the Need for Scientists Trained in Forest Products Marketing & Management	NC State
Sustainable Rural Communities National Needs Fellowships	Univ. MO
Meeting National Needs for Scholars Trained in the Economics & Management of Water Resources & the Environment	KS State
Training in Sustainable Sciences Through an Interdisciplinary Graduate Program in Rural Sociology	CO State
Linking Agriculture, Food & Environment: An Interdisciplinary Approach to Graduate Education	Tufts Univ.
Multicultural Fellows: Developing the Next Generation of Conservation Leaders at the University of Vermont	Univ. VT
Balancing Agricultural Economics for a Sustainable Agriculture National Needs Fellowship	Univ. MO

Degrees Awarded in Agricultural Business and Management Areas* at Reporting Institutions, 2001 - 2007					
Graduation Year	Associate	Baccalaureate	Masters	Doctorate	Total
2001-2002	37	2699	334	108	3178
2002-2003	29	3066	450	101	3646
2003-2004	85	2652	374	81	3192
2004-2005	190	2272	366	79	2907
2005-2006	60	2227	335	64	2686

- *Agricultural Markets and Trade's Portfolio Response in 2006:*
Market and trade work focuses on defining, clarifying and better understanding the role and functions of markets and their regulation; enhancing marketing methods and practices at the microeconomic (firm) level; and *ex ante* and *ex post* analysis of the economic and social impacts of domestic programs and policies.

A contemporary example of relevance is price monitoring. Economists track and analyze the temporal and spatial components of commodity prices. Basis, the dynamic link between markets, is a critical signal relating local bid prices to futures markets (e.g., Chicago Board of Trade) and terminal and export markets (e.g., Port of New Orleans). Post-Hurricane Katrina, previous Hatch research (Accession No. 0184814) on barge supply shocks on Arkansas price relationships is being used to guide price risk strategies of producers dependent on Mississippi River transport to export loading facilities.

Baccalaureate and graduate degrees in agricultural economics and agribusiness are awarded by about 45 public institutions. Dr. JH Bahn represents the Agency on the American Agricultural Economics Association's Teaching, Learning and Communication (TLC) Section. A major focus of the TLC is enhanced recruitment, especially of highly qualified women and minorities from urban and suburban high schools, into agricultural, food and resource economics baccalaureate programs at land grant institutions. The goal is increased recruitment and improved retention, graduation and placement of well-trained applied economists.

Degrees Awarded in Agricultural Economics, Selected Years				
Graduation Year	Baccalaureate	Masters	Doctorate	Total
1991-92	1,487	449	139	2,075
92-93	1,566	425	144	2,135
93-94	1,368	454	166	1,988
94-95	1,346	433	169	1,948
95-96	1,155	425	193	1,773
96-97	1,074	359	137	1,570
97-98	1,120	402	178	1,700
1999-2000	934	337	150	1,421
00-01	900	346	165	1,411
01-02	860	316	135	1,311
02-03	817	168	85	1,070
03-04	670	244	72	986
04-05	754	265	74	1,093

Source: Food and Agriculture Education Information System

A recent trend in agricultural economics higher education programs has been the growth of agricultural business degrees, particularly in the baccalaureate and master's degree. To an extent this has displaced some students from traditional agricultural economics positions, but it has also greatly expanded overall enrollment in the more broadly defined management sciences in a time when career opportunities are projected to continue expanding.

Degrees Awarded in Agricultural Management and Business[*], 2002 - 2004					
Graduation Year	Associate	Baccalaureate	Masters	Doctorate	Total
2002-2003	37	2,667	332	108	3,144
03-04	23	3,103	458	101	3,691
04-05	85	2,598	369	81	3,133

* Includes Agricultural Business & Management, Agribusiness/Agricultural Business Operations, Agricultural Economics, Farm & Ranch Management, Agricultural/Farm Supplies Retailing & Wholesaling, Agricultural Business Technology, and Other Agricultural Business & Management.
Source: Food and Agriculture Education Information System

Employment Opportunities in Food and Agricultural Management and Business

An expected 24,000 annual job openings in food and agricultural management and business are projected during the period 2005-2010. Of all projected jobs for college graduates in the food, agricultural, and natural resources system, just under half (46 per cent) are in the food and agricultural management and business occupations. During the same period about 22,000 graduates with expertise in the areas of management and business (including, but not limited to, Agricultural Economics, Farm and Ranch Management, Agricultural/Farm Supplies Retailing and Wholesaling, Agricultural Business Technology, Agribusiness/Agricultural Business Operations, and other Agricultural Business and Management) are projected.

Source: http://www.csrees.usda.gov/newsroom/news/csrees_news/USDA_05_Report2.pdf



Source: http://www.csrees.usda.gov/newsroom/news/csrees_news/USDA_05_Report2.pdf

Recent National Award for Excellence in College & University Teaching in the Food and Agricultural Sciences Recipients

Source: http://www.csrees.usda.gov/business/other_links/serdteachaward.html

- *International Economic Development's Portfolio Response in 2007:*
A number of exciting new international opportunities arose in 2006. A Presidentially-announced initiative to rebuild higher education partnerships between US and Indian agricultural universities was fully launched. The Agency played a lead role in designing this US-India Agricultural Knowledge Initiative (AKI) with active involvement of the Land Grant community. As guided by a Board of senior American and Indian government, academia and private sector officials, the AKI is updating and re-energizing traditional relationships that will provide both countries with needed expertise, insight and trained future leaders. The Agency was also asked by the Secretary to launch a program to help rebuild the Iraqi extension system. Using funds from the Department of State, CSREES partnered with USDA's Foreign Agricultural Service to design a relevant program. Texas A&M University was competitively awarded funding to lead a consortium of US Land-Grant universities (Utah State University, Washington State University, New Mexico State University, the University of California at Davis, Prairie View University and Dine Tribal College) in the implementation of the Iraq Agricultural Extension Revitalization project. The Agency also participated in high level discussions with Pakistani officials which resulted in the Joint Committee on Science and Technology emphasizing the ongoing need to enhance mutually beneficial programming in agriculture, alternative energy, nutrition, food safety, water resources and veterinary sciences. In all of these programs, the Agency facilitates the active involvement of the US Land-Grant community. In so doing, campus-based programs are further internationalized, and ultimately, American agriculture is enhanced.

The Current Research Information System (CRIS) database required by CSREES of its research and higher education awardees reported approximately 343 active or recently terminated projects related to international trade and development, and 140 inactive or recently terminated projects focused on international policy. The preponderance (169) was Hatch-funded applied research; another 41 were National Research Initiative competitive grants. Last year we reported the addition of 19 new projects related to international trade and development funded in 2004 and 2005. The areas of focus of these projects included trade, invasive species and food safety threats, displacement and other impacts of the market, trade and environmental policies and regulations of other nations that affect domestic producers and marketers, lumber and forest products trade. New projects are funded yearly, and the number reflects the specific program offerings, RFA guidance, and funding levels in any particular year.

During the 2005-2006 reporting period, 40 projects were added to the portfolio. Of these, three are Evans-Allen, 25 are Hatch, 1 is MacIntire-Stennis, 2 are National Research Initiative, 1 is an “other” grants, and 8 are special grants. Appendix A lists these projects, their accession number, state, funding source, and title.

The portfolio team reported 27 new projects funded in 2003, 2004 and 2005 related to international and domestic policy. Similarly, 61 new projects were added to the portfolio in 2005-2006. The titles of projects in Appendix B illustrate areas of focus of these new projects.

Appendix C provides the 2005-2006 listing of all CSREES-supported International Science and Education (ISE) Competitive grants. The intent of the ISE is to provide support to US universities as they internationalize their teaching, research, and extension programs so that the competitiveness of US agriculture is enhanced. The grants listed represent those awarded during the first two years of the ISE program, and results from the grants are just beginning to be reported. We expect to have additional information on them in subsequent reviews.

CSREES Response (Declining Numbers): See Exhibits XA and XB. We share the panel’s concern regarding the declining numbers of students trained in agricultural economics. Baccalaureate, masters and Ph.D. programs at Land Grant and American Association of State Colleges of Agriculture and Renewable Resources (AASCARR) universities are struggling to recruit students. This year, ECS Program Specialist Antonio McLaren, at the request of the USDA World Outlook Board, developed a prototype USDA Outlook Forum Diversity Project to sponsor junior and senior baccalaureate students to attend USDA’s annual Outlook Forum. This provided them the opportunity to meet producers, policymakers, business leaders, and government and industry to exchange ideas, and discuss timely issues at the forefront of America’s agriculture. The highly successful program will be expanded and formalized in the Annual Outlook Forums.

Dr. Sureshwaran took the initiative to develop a mentoring and development program for baccalaureate students planning to attend graduate school in agricultural economics. The program is modeled after, and will be collaborative with, a very successful model used by American Economics Association, Duke University and North Carolina A&T University.

Several contributing societal forces that may be beyond our control: 1) the decline in the number of agricultural producers and farmsteads, 2) the high average age of current farmers, 3) high entry costs for beginning farmers, 4) the declining numbers of farm owners and the shift toward farm operators, 5) the declining number of farm families supported by full-time agriculture, 6) competing demands for agricultural land, 7) depopulation of farms, rural landscapes, and small communities, 8) costs of higher education that may disadvantage farm and rural youth, 9) the eclipse of agriculture in public investment in research and development. 10) post 9/11 restrictions on student visas for foreign nationals desiring to study in the U.S.

Exhibit XA

Degrees Awarded in Agricultural Economics, 1991-2005				
Graduation Year	Baccalaureate	Masters	Doctorate	Total
1991-1992	1,487	449	139	2,075
1992-1993	1,566	425	144	2,135
1993-1994	1,368	454	166	1,988
1994-1995	1,346	433	169	1,948
1995-1996	1,155	425	193	1,773
1996-1997	1,074	359	137	1,570
1997-1998	1,120	402	178	1,700
1999-2000	934	337	150	1,421
2000-2001	900	346	165	1,411
2001-2002	860	316	135	1,311
2002-2003	817	168	85	1,070
2003-2004	670	244	72	986
2004-2005	754	265	74	1,093

Exhibit XB

Degrees Awarded in Agricultural Management and Business* 2002-2004					
Graduation Year	Associates	Baccalaureate	Masters	Doctorate	Total
2002-2003	37	2,667	332	108	3,144
2003-2004	23	3,103	458	101	3,691
2004-2005	85	2,598	369	81	3,133

*Includes Agricultural Business & Management, Agribusiness/Agricultural Business Operations, Agricultural Economics, Farm & Ranch Management, Agricultural/Farm Supplies Retailing & Wholesaling, Agricultural Business Technology, and Other Agricultural Business & Management.
Source: Food and Agriculture Education Information System

Despite many of these trends, CSREES, through its Science and Education Resource Development unit and the research and integrated projects funded through its Competitive Programs unit, continues to encourage undergraduate and graduate student entry into the fields of agricultural science and provides incentives to train

graduate students through remunerated participation in research projects. For example, the Markets and Trade program of the National Research Initiative which contributes to this portfolio through research focuses on international trade, trade policy, and domestic agricultural policy has supported 102 graduate students (salary, benefits, and tuition assistance) between 1999 and 2005, while the Rural Development program which contributes to this portfolio through research on domestic policy effecting rural communities and landscapes has supported 74 graduate students during this time span.

Focus

Agricultural Markets and Trade's Panel Recommendation

The portfolio lacks needed focus on critical issues. Too much attention is given to evaluating existing policy relative to the development of new policies and analysis of policy alternatives. Policy analysis should get relatively more attention in the Markets and Trade section of the NRI; policy analysis should get relatively more attention in other sections of all competitive grant programs (NRI & Sec. 406).

CSREES should be more strategic and proactive in providing leadership to international programs. A single nation (Armenia) should not receive such a disproportionate share (85 percent) of the total developmental assistance funding.

International Economic Development's Panel Recommendation

The portfolio focus on critical issues generally meets expectations. However, CSREES should be more strategic and proactive in providing leadership to international programs. A single nation (Armenia) should not receive such a disproportionate share (85 percent) of the total developmental assistance funding.

- *Markets, Trade, Policy and International Development's 2008 Portfolio Response:* Under Scope, above, the panel commented that "(t)he wide variety of projects exceeds expectations." Under Emerging Issues, below, the panel noted that "(i)dentification of contemporary and emerging issues is good."

This portfolio has a history of focus on market, policy, trade and development issues that are critical to the food and fiber sector. The spectrum of work extends from the highly theoretical to the empirical and includes a major outreach component to both public and private decision makers in domestic and overseas venues.

Economic and market principles are size and scale neutral. The work of this portfolio supports all scales of agriculture, with major focus on distribution systems and value chains that are important to small and medium sized producers, specialty crops, and alternative and value added enterprises (including biofuels and environmental goods and services), as well as large, "commercial" enterprises.

Agency-sponsored marketing research is highly productive and visible in the research literature, with a high proportion of published articles attributed to CSREES funding. Our Agricultural Market and Trade web site lists over 40 marketing resources that

reach hundreds of thousands of producers and marketers annually. The NRI Markets and Trade Program currently has the highest success rate (30 per cent, 18 projects in the most recent competition) of the entire National Research Initiative.

Thirty-nine domestic and international policy projects were completed during 2007. This work covered a broad spectrum of new and critical policy topics, including:

- Environment
 - AR Nutrient Management
 - CA Environmental Management Implications
 - CA Wildlife Conservation
 - GA Water Use
 - ME Consequence of Land Use Change
 - MI Impacts of Land Use Change
 - NJ Comprehensive Resource Planning
 - OR Rangeland Management
 - UT Water Property Rights Transfer
 - WI Cross Boundary Forestry Management
- Agriculture
 - CA Farmland Protection
 - GA Ag Risk Management
 - IA Ag Trade
 - IA Meat Competitiveness
 - IA Agribusiness Competitiveness
 - IA International Trade Analysis
 - IA International Competitiveness
 - MO Food and Agricultural Policy
 - NY Berry Crop Strategic Planning
 - WV Product and Market Development
 - WI Food System Performance
 - WI International Dairy Research
- Biotech/Genetics
 - CA Impacts of Gene Flow
 - AK Ethnobotany
 - NE Genetic Modification Enforcement
 - NE International Genetic Enforcement
- Development
 - IA Rural Development
 - MN Rural Labor Markets
 - NH Rural Labor Markets
 - NY Privatizing Public Services
 - OR Business Location Decisions
 - UT Rural Change

- Consumers/Health/Nutrition
 - IA Foodborne Disease
 - NY Consumer Welfare
 - NY Nutrition Policy
 - NY International Nutrition Policy
 - UT Food Safety Regulation Market Adjustment

The international trade and development focus has also expanded as opportunities and funding permit. Funding for the International Science and Education Competitive Grants Program, while modest, continues to grow. Currently 33 active grants focus on:

- Farming Systems
- Markets
- Sustainable and Organic Farming
- Natural Resource Management
- Education, Teaching, and Service Learning
- Competitiveness
- Rural Development
- Biowaste Recovery and Recycling
- Livestock Production

Although the International Programs office has broadened its portfolio and is more geographically diversified, it should be noted that a single nation (Iraq) once again represents a disproportionate share of total funding. While it may be preferable for the office to manage a number of small- to mid-sized projects around the world, political reality, and the availability of funds and staff size often determine developmental assistance. Since the office's mission is to assist universities as they strive to internationalize their programs, the geographical emphasis is less important than the breadth and depth of U.S. university participation. Recent project activities have taken place in countries suffering from political upheaval and war. Although it may be several years before such countries become viable trading partners, their instability can negatively impact global security and international commerce.

- *Agricultural Markets and Trade's Portfolio Response in 2007:*
Policy is one component of this portfolio, and the Markets and Trade NRI program does, in fact, actively support this area of work. Currently there are 42 funded NRI grants that focus on Knowledge Areas 610 (Domestic Policy) and 611 (Foreign Policy). System wide (from all funding sources) there are 418 active policy projects with focus on these two KAs.

Analysis and evaluation of existing policies is approached from a comparative perspective and results in new policy recommendations and alternatives. Policy options and practical solutions are central requirements for work done in Markets and Trade, and Rural Development in the National Research Initiative. Pending

improvements in the reporting system (OneSolution and CRIS) will better distinguish between evaluation of existing policy and identification of policy options and alternatives.

Our development assistance programming no longer includes Armenia, but does include current work in Afghanistan, India, Iraq, and the Congo and recent work in Ghana and Nigeria.

CSREES funding for policy related projects (KAs 610, Domestic Policy Analysis, and 611, Foreign Policy and Programs is primarily funded through Hatch, Special Research Grants (congressional earmarks), and Other monies. National Research Initiative funded three policy research projects in 2005: “Public Investment Policy and Industry Incentives in Agricultural and Life Science Research”; “Impact of Antidumping Regulations on Food and Fiber Trade”; “North American Trade Suspension Agreements and Winter Tomato Supply Response.”

Agricultural policy educational activities have accelerated as farm legislation is currently debated. Critical policy topics include maintaining compatibility with the agreements and mandates of the World Trade Organization, decoupling production related subsidies (and producer decision making to optimize benefits and minimize risk), and revenue protection. CSREES maintains a very active list server for policy specialists around the nation.

More broadly, this portfolio has a very extensive focus on critical marketing topics and issues (See Exhibit 2, below), with over \$8.5 million direct CSREES research and education investment the year of this internal review. This work is supportive of all scales of agriculture, with major focus on distribution systems and value chains important to small and medium sized producers, specialty crops, and alternative and value added enterprises (including biofuels and environmental goods and services). Agency-sponsored marketing research is highly productive and very visible in the research literature, with a high proportion of published articles attributed to CSREES funding. Our Agricultural Market and Trade web site lists over 40 marketing resources (interactive web sites at land grant and AASCARR institutions) that reach hundreds of thousands of producers and marketers annually.

- *Agricultural Markets and Trade’s Portfolio Response in 2006:*
Policy evaluation of existing policies is typically approached from a comparative perspective and the results are new policy recommendations and policy alternatives. Policy options and practical solutions are central requirements for work done in Market and Trade, and Rural Development within the National Research Initiative. Pending improvements in the reporting system (One Solution and CRIS) should better capture this policy work and distinguish between evaluation of existing policy and identification and evaluation of policy options and alternatives. The CSREES portfolio contains a number of focal areas, including policy. Recent (FY 2003 funding or later) policy research focal areas are summarized in the table below. CSREES funding for policy related projects (Research Problem Areas 610, Domestic

Policy Analysis and 611, Foreign Policy and Programs is primarily funded through Hatch, Special Research Grants (congressional), and Other monies. No National Research Initiative funding for policy research was found between 2003 and 2004 in a CRIS search, but 2005 results indicate three policy-related projects: “Public Investment Policy and Industry Incentives in Agricultural and Life Science Research”; “The Impact of Antidumping Regulations on Food and Fiber Trade”; and “North American Trade Suspension Agreements and Winter Tomato Supply Response”. Educational policy activities are accelerating in anticipation of the next round of farm legislation which will be debated in 2007. Topics include maintaining compatibility with the agreements and mandates of the World Trade Organization, decoupling production related subsidies, and revenue protection for producers.

Policy Related Research Projects Funded in 2003 or Later, as Reported in the Current Research Information System			
Institution	Title	Years	Type
Florida	Economics of Managing Invasive Species in Tropical & Subtropical Areas of the US Caribbean Basin	2003-05	Special
Wisconsin	Where is the Social in Regulation of Ag Biotech?	2003-06	Hatch
Washington State	Quantitative Analyses in International. Food & Commodity Markets	2003-06	Hatch
Cornell	Nutrition Policy Analysis	2003-06	State
Iowa State	Food & Agricultural Policy Institute	2003-06	Special
North Carolina St.	Market Risk & US Trade Policy	2003-07	Hatch
Oregon State	Market Structure & Productivity Growth: Implications for Trade & Foreign Investment in Agriculture*	2003-08	Hatch
Texas A&M	Impacts of Trade & Domestic Policies on Competitiveness & Performance of Southern Agriculture*	2003-08	Hatch
Michigan State	Impacts of Trade & Domestic Policies on Competitiveness & Performance of Southern Agriculture*	2003-08	Hatch
Louisiana State	Impacts of Trade & Domestic Policies on Competitiveness & Performance of Southern Agriculture*	2003-08	Hatch
Auburn	Impacts of Trade & Domestic Policies on Competitiveness & Performance of Southern Agriculture*	2003-08	Hatch
Arkansas	Impacts of Trade & Domestic Policies on Competitiveness & Performance of Southern Agriculture*	2003-08	Hatch
Georgia	Impacts of Trade & Domestic Policies on Competitiveness & Performance of Southern Agriculture*	2003-08	Hatch
Michigan State	Consequences of Globalization on Fisheries Resources in the Great Lakes & Other Shared Fisheries	2003-08	Hatch
California Berkeley	Analyzing Non-Governmental Strategies for Regulating the Environmental & Social Impacts of Industry	2003-08	Hatch
Penn State	Economics of the Food & Ag System	2003-09	Hatch
Michigan State	Analysis of the Econ & Political Economy of National & International Agricultural Policies & Decision Processes	2004-09	Hatch
Rutgers	Economic Analysis of Change: Trade Arrangements, Bioterrorism Threats, & Renewable Fuel Requirements on the US Grain & Feed Sector	2004-09	Hatch
Purdue	Economic Welfare Consequences of Policy & Marketing Regulation Affecting US Commodity Markets	2004-09	Hatch
Purdue	Global Economic Analysis of Trade in Farm & Food Products	2004-09	Hatch
California	Prevention or Cure? National Responses to Global Infectious	2004-09	Hatch

Berkeley	Disease as a Function of Environmental & Agricultural Change		
California Berkeley	Implications for Improved Regional Governance of Fisheries Development & Extractive Industries in the South Pacific & Indian Ocean Region	2004-09	Hatch
California Berkeley	Support for Investment in Scientific Research: Study of Recent Change in the Global Patent System & Potential Reforms	2004-09	Hatch
Missouri	Food & Agricultural Policy Research Institute	2005-06	Special
Iowa State	Agricultural Trade Analysis	2005-07	Other
Iowa State	International Competitiveness & Marketability of Midwest Agri-business Products	2005-07	Special
Nebraska	Economic Analysis of International Agricultural Trade Issues Before the World Trade Organization	2005-09	Hatch

* Multistate research projects

Source: Current Research Information System

- *International Economic Development's Portfolio Response in 2007:*
Our development assistance programming no longer includes Armenia, but does include current work in Afghanistan, India, Iraq, and the Congo and recent work in Ghana and Nigeria.

Emerging Issues

Agricultural Markets and Trade's Panel Recommendation

Identification of contemporary and emerging issues is good. More could be done to provide incentives for research on emerging issues, such as creating a special category for such issues in the NRI.

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:*
By their nature CSREES Requests for Applications (RFAs) include recognition of the importance of emerging issues, and they include provisions to accommodate them. Creating a special category for emerging issues would give the erroneous impression that other competitive programs do not focus on critical emerging issues. Scientists preparing proposals justify the importance of the proposed topic of study and demonstrate appropriate, state of the science methodologies. Those who fail to do so face a very low probability of receiving funding. Creating a special category for emerging issues would give the erroneous impression that other competitive programs do not focus on critical emerging issues.

If identified emerging issues fall outside of the stated priorities for a given year, they are considered when grant areas of focus are assessed annually to reexamine research priorities and adjust the emphasis in response to emerging issues, as appropriate.

NPLs are also vigilant for emerging issues defined in proposals for formula funding and special funding (all are merit reviewed and approved prior to the release of funds) and through their duties as liaisons to multistate research committees, regional extension committees, advisory committees, and states.

The proportion of NRI funding for interdisciplinary and multifunctional funding (e.g., integrated funding) is increasing annually. In addition, increased focus on formula funded research and extension that is multistate (including multistate research committees) also helps support work on critical emerging topics, perhaps even before they become nationally recognized as such.

In 2007, a total of 415 new, revised, or extended projects were listed in the CRIS system for the Knowledge Areas in this portfolio, of which 303 were funded by CSREES³.

CSREES Funded Activities in Markets, Trade, Policy, and International Development, 2007		
Funding Source	Number*	Focus
NRI	24	Marketing, Distribution, Trade
Hatch	280	Marketing, Distribution, Trade, Development, Policy
Evans Allen	8	Marketing, Trade, Policy
Smith Lever 3d	0	
Animal Health	0	
McIntire Stennis	19	Forestry, Wood Products Marketing, Policy
Cooperative Agreement	0	
RREA	5	Resource Markets, Policy
SERD	2	Marketing Education
Small Business	12	Business Development; Commercialization
Special	40	Marketing, Distribution

* Total is not additive since some projects may include multiple Knowledge Areas

- *Agricultural Markets and Trade's Portfolio Response in 2007:*
The agency has robust and specifically targeted Requests for Applications for competitive programs, especially for the National Research Initiative and the Small Business Innovation Research programs.

CSREES explicitly solicits stakeholder feedback and information in every Request For Applications: STAKEHOLDER INPUT: The Cooperative State Research, Education, and Extension Service (CSREES) is requesting comments regarding this request for applications (RFA) from any interested party. These comments will be considered in the development of the next RFA for the program. Such comments will be used to meet the requirements of section 103(c) (2) of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7613(c) (2)). This section requires the Secretary to solicit and consider input on a current RFA from persons

³ Some other Agency funding that includes market, trade and policy projects are Sustainable Agriculture Research and Education, Risk Management Education, and Trade Adjustment. These projects are currently not reported through the CRIS system and are not easily retrievable.

who conduct or use agricultural research, education and extension for use in formulating future RFAs for competitive programs. Comments should be submitted as provided in the DATES portion of this announcement.

The agency, primarily through Economic and Community Systems NPLs, is represented on Multistate Research Committees related to economics, trade and policy related topics. ECS NPLs serve 40 Multistate Research Committees, of which 19 are directly related to marketing, trade and policy topics. It is impossible to meet with these on an annual basis, and the unit does, in some cases, depend on Program Specialists to serve as agency representatives to some committees.

The portfolio is increasingly targeted, and although it may not be possible to address some critical emerging issues in a timely manner, activities planned and implemented by the International Programs office tend to be more closely linked to changing issues and world events. Development assistance and outreach efforts this year in Iraq and Afghanistan are examples of how the Agency has responded to emerging foreign policy challenges. Additionally, due to emerging domestic demographic changes, the National Initiative to Internationalize Extension increased its emphasis on serving foreign-born populations with US communities, in addition to helping Americans better understand, and compete in, today's global economy. Moreover, the Agency, primarily through Economic and Community Systems NPLs, is fully represented on Multistate Research Committees related to economics, trade, and policy related topics, and this additionally helps in the identification and incorporation of critical emerging issues. Exhibit 3 provides the title of these multistate projects and the NPL currently assigned.

- *Agricultural Markets and Trade's Portfolio Response in 2006:*
The Agency is currently developing more robust and specifically targeted Requests For Applications, especially for the National Research Initiative and the Small Business Innovation Research programs (emphasis added):

SUPPLEMENTAL RFA, INTEGRATED PROGRAMS: *The supplemental National Research Initiative RFA stated the purpose of NRI Integrated Programs to support research, extension, and education grants that address critical emerging U.S. agricultural and rural issues.* In awarding these grants, priority was given to projects that are: (1) multistate, multi-institutional, or multidisciplinary; or (2) projects that integrate agricultural research, extension, and education. Integrated projects hold the greatest potential to produce and transfer knowledge directly to end users, while providing for educational opportunities to assure agricultural expertise in future generations.

Source: http://www.csrees.usda.gov/funding/nri/pdfs/2003_ann_report.pdf

Former Deputy Administrator for Competitive Programs Dr. Ted Wilson established a procedure for teams to collaborate on development of comprehensive RFAs with clear priorities and foci, and that better integrate the multiple funding authorities available to directly support the USDA, Research, Education and Economics, and

CSREES strategic goals and objectives. Collaboration includes teams of National Program Leaders with common topical interests, and provides opportunities for Agency NPLs, and social scientists to offer comments and suggestions in the preparation of common RFAs. Additionally, at the conclusion of each funding year NPLs have the opportunity to review and critique the competitive granting process, identify emerging needs and opportunities, and take corrective action. In lieu of this procedure, the new Deputy Administrators for Economic and Community Systems, Families, 4-H, and Nutrition, and Competitive Programs, Drs. Frank Boteler, Mary McPhail Gray, and Anna Palmisano respectively, have designated a new Social Science Working Group of all agency social science NPLs who will serve in an advisory capacity for issue identification, planning, evaluation, and development of competitive programs. This promises to better diffuse social science and emerging human dimensions issues in agriculture throughout the National Research Initiative offerings and other competitive programs.

Congressional action in 2003 authorized the NRI to commit up to 20 per cent of its budget to integrated activities that weave research, education, and extension efforts into a unified response to critical emerging issues; many of the critical issues identified earlier by IFAFS have been incorporated into existing NRI program descriptions, and ongoing RFA planning will continue to consider critical emerging issues for incorporation into our competitive program solicitations. The NRI has created several new “Coordinated Agricultural Projects” (CAPs) to address agricultural emergencies, such as infectious animal diseases like Johnes, Avian Influenza, and Bovine Spongiform Encephalopathy (BSE). As additional NRI funding becomes available, we have the potential to create a CAP for critical and emerging issues specific to markets and trade, agricultural economics, the social and human dimensions of agriculture, food, the environment and communities.

The Agency explicitly solicits stakeholder feedback and information in every Request For Applications:

STAKEHOLDER INPUT: The Cooperative State Research, Education, and Extension Service (CSREES) is requesting comments regarding this request for applications (RFA) from any interested party. These comments will be considered in the development of the next RFA for the program. Such comments will be used to meet the requirements of section 103(c)(2) of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7613(c)(2)). This section requires the Secretary to solicit and consider input on a current RFA from persons who conduct or use agricultural research, education and extension for use in formulating future RFAs for competitive programs. Comments should be submitted as provided in the **DATES** portion of this announcement.

The Agency, primarily through Economic and Community Systems NPLs, is fully represented on Multistate Research Committees related to economics, trade and policy related topics, and this additionally helps in the identification and incorporation of critical emerging issues.

Economics Related Multistate Research Committees and CSREES Representatives		
Number	Title	Representative
NC1003	Impact Analysis & Decision Strategies for Agricultural Research	Dr. <u>Bailey</u>
NC1100	Rural Development, Work & Poverty in the North Central Region	Dr. <u>Cunningham</u> Dr. <u>Maggard</u>
NC1013	Economic & Psychological Determinants of Household Savings Behavior	Dr. Schuchardt
NC1014	Agricultural & Rural Finance Markets in Transition	Dr. Schuchardt
NC1016	Economic Assessment of Changes in Trade Arrangements, Bio-terrorism Threats, & Renewable Fuels Requirements on U.S. Grain & Oilseed Sector	Dr. Bailey
NCCC065	Social Change in the Marketplace: Producers, Retailers, Consumers	Dr. Bailey
NCERA194	Improving Management and Effectiveness of Cooperatively Owned Business Organizations	Dr. Bailey
NECC063	Research Committee on Commodity Promotion	Dr. Bailey
S290	Technical & Economical Efficiencies of Producing, Marketing, & Managing Environmental Plants	Dr. Bailey
S1016	Impacts of Trade & Domestic Policies on Competitiveness & Performance of Southern Agriculture	Dr. Bailey
S1019	Fruit & Vegetable Marketing Innovations & Demand Assessment	Dr. Bailey
SAC007	Agricultural Economics & Rural Sociology	Dr. <u>Hunt</u> Dr. <u>Maggard</u>
SERA032	Coordination of Value-Added Activities	Dr. Bailey
W1004	Marketing, Trade, & Management of Fisheries & Aquaculture Resources	Dr. Hunt Dr. Jensen
W1177	Enhancing the Competitiveness of U.S. Meats	Dr. Miller
W1190	Interfacing Technological, Economic, & Institutional Principles for Managing Inter-sector Mobilization of Water	Dr. Hunt Dr. O'Neill
WEA055	Rangeland Resource Economics and Policy	Dr. Hunt
WEA072	Agribusiness Research Emphasizing Competitiveness	Dr. Bailey
WEA101	Assessing the Chinese Market for U.S. Agricultural Products	Dr. Bailey
WEA1001	Reduction of Error in Rural & Agricultural Surveys	Dr. Bailey
WEA1004	Agricultural & Community Development in the American Pacific	Dr. <u>Maggard</u> Dr. Auburn Dr. <u>Tupas</u>

Source: NIMMS

Emerging Issues

Agricultural Markets and Trade's Portfolio Recommendation

National Research Initiative (NRI) should set aside a portion of its funds (perhaps 10 percent) to address critical emerging issues, while allowing NRI to continue funding its ongoing lines of research. Proposals submitted for critical emerging issues could be interdisciplinary and multifunctional (research-teaching-extension).

International Economic Development's Portfolio Recommendation

Identification of contemporary and emerging issues is good. More could be done to provide incentives for research on emerging issues, such as creating a special category for emerging issues in the NRI.

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:* As the Agency's capstone research funding vehicle, the National Research Initiative focuses on topics of critical importance to society. Creating a special NRI category for emerging issues would be counterproductive by implying that other NRI programs do not focus on contemporary topics. Scientists preparing NRI proposals justify the importance of the proposed topic of study and demonstrate appropriate, state of the art methodologies. Those who fail to do so face a very low probability of surviving the peer review process.

Each of the NRI areas of focus is assessed year to year to reexamine research priorities and adjust the emphasis in response to emerging issues, as appropriate. There is considerable interaction between NRI, other competitive funding and program NPLs to ensure that emerging issues are identified and articulated to the appropriate NPL(s). The proportion of NRI funding for interdisciplinary and multifunctional funding (e.g., integrated funding) is increasing annually. Currently up to 25 percent of funding is mandated for integrated projects. The new Food, Conservation, and Energy Act of 2008 will raise this ceiling.

Increased focus on formula funded research and extension that is multistate also helps support work on critical emerging topics, perhaps even before issues become nationally recognized as critical.

- *Agricultural Markets and Trade's Portfolio Response in 2007:* Given the limited size of the NRI funding portfolio, it is not feasible to develop a larger number of targeted programs beyond those currently offered.

Congressional action authorized the NRI to commit a portion of its budget to integrated activities that weave interdisciplinary and multifunctional research, education and extension efforts into a unified response to critical emerging issues. Many of the critical issues identified earlier by IFAFS have been incorporated into existing NRI program descriptions, and ongoing RFA planning continues to consider critical emerging issues for incorporation into our competitive program solicitations. NRI created Coordinated Agricultural Projects (CAPs) to address agricultural emergencies.

- *Agricultural Markets and Trade's Portfolio Response in 2006:* Congressional action in 2003 authorized the NRI to commit up to 20% of its budget to integrated activities that weave research, education, and extension efforts into a unified response to critical emerging issues; many of the critical issues identified earlier by IFAFS have been incorporated into existing NRI program descriptions, and ongoing RFA planning will continue to consider critical emerging issues for incorporation into our competitive program solicitations. The NRI has created several new "Coordinated Agricultural Projects" (CAPs) to address agricultural emergencies, such as infectious animal diseases like Johne's, Avian Influenza, and Bovine Spongiform Encephalopathy (BSE). As additional NRI funding becomes available, we have the potential to create a CAP for critical and emerging issues specific to

markets and trade, agricultural economics, the social and human dimensions of agriculture, food, the environment and communities.

- *International Economics and Development's Portfolio Response in 2007:*
CSREES Response: Congressional action in 2006 authorized the NRI to commit up to 22% of its budget to integrated activities that weave research, education, and extension efforts into a unified response to critical emerging issues. (an increase of 2% from the 2003 authorization). Many of the critical issues identified earlier by IFADS have been incorporated into the integrated NRI program descriptions. The NRI "Coordinated Agricultural Projects" (CAPs) address agricultural emergencies, such as infectious animal diseases like Johnes, Avian Influenza, and Bovine Spongiform Encephalopathy (BSE). In FY 2006, the Agency adopted several efforts to integrate social science priorities into several NRI programs. Programs such as Managed Ecosystem (NRI 23.1), Water and Watershed (NRI 26.0), Biobased Products (NRI 71.2), Human Nutrition and Obesity (NRI 31.5), etc, have now become more interdisciplinary and address the emerging issues in agricultural sciences and natural resource management.

The portfolio is increasingly targeted, and although it may not be possible to address some critical emerging issues in a timely manner, activities planned and implemented by the International Programs office tend to be more closely linked to changing issues and world events. Development assistance and outreach efforts this year in Iraq and Afghanistan are examples of how the Agency has responded to emerging foreign policy challenges. Additionally, due to emerging domestic demographic changes, the National Initiative to Internationalize Extension increased its emphasis on serving foreign-born populations with US communities, in addition to helping Americans better understand, and compete in, today's global economy. Moreover, the Agency, primarily through Economic and Community Systems NPLs, is fully represented on Multistate Research Committees related to economics, trade, and policy related topics, and this additionally helps in the identification and incorporation of critical emerging issues. Exhibit 3 provides the title of these multistate projects and the NPL currently assigned.

Exhibit 3

International Economic Development Related Multistate Research Committees and CSREES Representatives		
REGION NUMBER	COMMITTEE TITLE	CSREES REP(S)
NC 1014	Agricultural and Rural Finance Markets in Transition	Schuchardt
NC 1016	Economic Assessment of Changes in Trade Arrangements, Bio-terrorism Threats and Renewable Fuels Requirements on the U.S. Grain & Oilseed Sector	Bahn
NCCC 065	Social Change in the Marketplace: Producers, Retailers, Consumers	Vice Bailey
S 1016	Impacts of Trade and Domestic Policies on Competitiveness & Performance of Southern Agriculture	Bahn
W 1004	Marketing, Trade and Management of Fisheries and Aquaculture Resources	Jensen Bahn
W 1177	Enhancing the Competitiveness of U.S. Meats	Bahn
WEA 101	Assessing China as Market and Competitor	Bahn
WEA 072	Agribusiness Research Emphasizing Competitiveness	Vice Bailey
WEA 1004	Agricultural and Community Development in American Pacific	Maggard Auburn Tupas

Source: NIMMS

Integration**Agricultural Markets and Trade's Panel Recommendation**

This portfolio has achieved very good integration of research, teaching, and extension. Principal investigators should be given incentives to take more responsibility for extending research results.

International Economic Development:

This portfolio has achieved very good integration of research, teaching, and extension. Principal investigators should be given incentives to take more responsibility for extending research results.

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:* Integration of research, teaching, and extension remains strong across the management decision making portfolios. In the Marketing and Trade portfolio, integration has been increased with related portfolios, particularly those relating to sustainability, small farms, bioenergy, environmental services, and natural resources.

Both Economics and Community Systems and Competitive Programs NPLs have taken leadership to increase the reach and footprint of agency-funded research results. All CSREES economics grant recipients are informed of their responsibility for extending research results as a binding component of the Terms and Conditions of each funding transaction.

Annually the editors of major agricultural and resource economics journals are requested to solicit attribution of funding sources in articles selected for publication. Editors have responded well, and the attribution of CSREES-funded research has noticeably increased.

A CSREES economist NPL was appointed by the President of the American Agricultural Economics Association to participate on the AAEA Outreach Task Force. The Task Force developed a proposal for strengthening the extension/outreach function of the Association and of individual members. Proposed activities include training and support for extending research results, new media and opportunities to do so, and an institutional structure to accomplish the task.

- *Agricultural Markets and Trade's Portfolio Response in 2007:*
In October 2005 CSREES organized and held a one day workshop to identify strategies for enhancing the effectiveness of integrated competitive programs. The workshop included presentations and participation by Principal Investigators and National Program Leaders involved with integrated programs. Breakout sessions identified various strategies that included possible incentives for extending research results that will enhance the overall relevance and effectiveness of integrated programs.

In the near future, principal investigators will have more guidance from CSREES in providing results on a consistent basis after the rollout of the One Solution System, which will be a one-stop portal of accountability for all Research, Education, and Extension investments. More information is included under the "Portfolio Accountability" section.

- *Agricultural Markets and Trade's Portfolio Response in 2006:*
Food, agricultural and resource economics departments are typically well integrated, with most faculty holding joint appointments in research/teaching, research/extension or, less often due to classroom scheduling conflicts, teaching/extension. The nature of applied economics facilitates functional integration not only within the discipline, but also with the other food, agricultural and natural resource and environmental sciences.

More attention to integration accountability is included in Requests for Applications. Increased focus is placed on defining integrated proposals (per recommendations from the Developing and Implementing Integrated Research, Education, and Extension Projects: Lessons from our Partners Workshop, August 2005), also in Hatch project review and approval, and in guidelines for Plans of Work. The Methods Section of all Requests for Applications (typically Section 28 of RFAs) states (emphasis added):

Methods: The procedures or methodology to be applied to the proposed effort should be explicitly stated. This section should include but not necessarily be limited to:

1. A description of stakeholder involvement in problem identification, planning, implementation and evaluation;
2. A description of the proposed project activities in the sequence in which it is planned to carry them out;
3. Techniques to be employed, including their feasibility and rationale for their use in this project;
4. Kinds of results expected;
5. *Means by which extension and education activities will be evaluated;*
6. Means by which data will be analyzed or interpreted;
7. *Details of plans to communicate results to stakeholders and the public;*
8. Pitfalls that might be encountered; and
9. Limitations to proposed procedures.

Source: CSREES Key for Developing RFAs.

The USDA Small Business Innovative Research (SBIR) Program provides opportunities to integrate research and extension. SBIR is a highly competitive grant program for U.S.-owned and independently operated for-profit businesses of 500 employees or less. The USDA is one of twelve federal agencies required to reserve 2.5 per cent of research and development dollars for small businesses. National Research Initiative and other CSREES grant recipients are encouraged to transfer the technology developed from their grant to real world applications through the SBIR program. University faculty can serve as Project Directors (subject to certain conditions) or consultants on SBIR grants. Dr. Siva Sureshwaran leads the Markets and Trade SBIR program.

In terms of incentives for principal investigators to extend the results of their NRI research, both the Markets and Trade and Rural Development programs have identified the “development of a creative dissemination plan” as an evaluation criteria for applications, and prospective applicants are encouraged to include modest estimates for creative dissemination of research results in their project budgets. This requirement is facilitated by the high proportion of social science applicants to the Markets and Trade program who hold joint appointments in research, teaching, and/or extension.

- *International Economic Development’s Portfolio Response in 2007:*
Increased focus on integration accountability is included in Requests for Applications, in Hatch and Special project review and approval, and in guidelines for Plans of Work. The USDA Small Business Innovative Research (SBIR) Program provides opportunities to integrate research and extension. National Research Initiative and other CSREES competitive grant recipients are encouraged to transfer the technology developed from their grant to real world applications through the SBIR program.

Markets and Trade and Rural Development programs within the NRI identify “development of a creative dissemination plan” as an evaluation criterion for applications, and prospective applicants are encouraged to include modest estimates

for creative dissemination of research results in their project budgets. In addition, all Project Directors are required to attend the annual Project Director's meeting and share their research with others including CSREES and other federal agency staff. Creative dissemination is also facilitated by the high proportion of social science applicants to the Markets and Trade program who hold joint appointments in research, teaching, and/or extension; as a result, their outreach efforts to disseminate research findings are more fluid and cohesive than those of many "bench" or "field" researchers from the biological and physical sciences.

Multidisciplinary

This recommendation is applicable to both portfolios

Agricultural Markets and Trade and International Economic

This portfolio has a very good mix of work with other disciplines. However, the Panel questions whether there is adequate, multidisciplinary participation in development assistance projects. Further progress would occur if economic analyses were invited in other competitive program areas outside of Markets and Trade in the NRI.

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:* Development assistance projects, by nature, tend to be multidisciplinary and integrated. However, the Agency and partnership contribution may sometimes appear to be narrow or restricted due to the collaborative nature of our participation in development assistance projects initiated under the responsibilities and legal authorities of other agencies and departments. These groups approach the Agency for assistance in placing experts in components of broader, more expansive projects and development efforts that often extend beyond the mission boundaries of CSREES or USDA. The training agenda for the Iraq project included such diverse subject matter emphases as beekeeping, dairy, horticulture, pest management, and women and youth development. Project activities in India focus on areas such as marketing, food safety, water resource management and biotechnology.

CSREES sponsored work is increasingly multidisciplinary, multistate, and integrated. The proportion of NRI funding for interdisciplinary and multifunctional funding (e.g., integrated funding) is increasing annually, and increased Congressional and Administration focus on formula funded research and extension that is multistate and broad in scope also helps support work on critical emerging topics.

A number of agency programs foster interaction between the social and environmental scientists, and with plant and animal scientists to conduct work that important to the long-term viability, competitiveness and efficient use of agricultural and natural resources, ensure public welfare, and support the development of communities.

- *Agricultural Markets and Trade's Portfolio Response in 2007:*
Beginning in mid-2004, CSREES began administering the Agricultural Prosperity for Small and Medium-Sized Farms program, which is under the National Research Initiative. The purpose of this program is to foster interdisciplinary studies to improve our understanding of the interactions between the economic and environmental components important to the long-term viability, competitiveness and efficiency of small and medium-sized farms (including social, biological and other components, if necessary). This program attempts to bring together and integrate disparate work conducted separately on each of these factors in the past. Program outcomes are expected to provide new insights to the factors that enhance rural prosperity, especially for smaller producers. To date, 15 projects were funded in fiscal year 2005, and 13 were funded in fiscal year 2006.

In 2006, CSREES accessed the services of a wide variety of university experts to assist in development projects that were funded by other agencies. For example, we used funds provided by the Millennium Challenge Corporation to support work by specialists from the University of Wisconsin and Louisiana State University in Ghana on land tenure reform and post-harvest handling, respectively. We used USAID support to arrange for colleagues from Michigan State University, the University of Nevada, the University of Idaho, and Pennsylvania State University to train Indian extension leaders in food safety, marketing and other high priority technical areas. We fielded experts from the University of Georgia, Michigan State University, Purdue University, Colorado State University and the California Polytechnic State University for work in Afghanistan. Colleagues from The University of Wisconsin and Bay Mills Community College provided advice to Congolese and Rwandan horticultural counterparts. In all of these cases, the Agency announced these opportunities to the Land-Grant community, and the services provided by the chosen experts were widely acknowledged as being especially relevant and timely.

- *International Economic Development's Portfolio Response in 2007:*
CSREES Response: In 2006, CSREES accessed the services of a wide variety of university experts to assist in development projects that were funded by other agencies. For example, we used funds provided by the Millennium Challenge Corporation to support work by specialists from the University of Wisconsin and Louisiana State University in Ghana on land tenure reform and post-harvest handling, respectively. We used USAID support to arrange for colleagues from Michigan State University, the University of Nevada, the University of Idaho, and Pennsylvania State University to train Indian extension leaders in food safety, marketing and other high priority technical areas. We fielded experts from the University of Georgia, Michigan State University, Purdue University, Colorado State University and the California Polytechnic State University for work in Afghanistan. Colleagues from The University of Wisconsin and Bay Mills Community College provided advice to Congolese and Rwandan horticultural counterparts. In all of these cases, the Agency announced these opportunities to the Land-Grant community, and the services provided by the chosen experts were widely acknowledged as being especially relevant and timely.

Greater emphasis is being provided to the integration of social science issues in other competitive program areas outside of Markets and Trade in the NRI. Deputy Administrator of Competitive Programs, Dr. Anna Palmisano, had identified integration of social sciences as a priority in the preparation of RFA for FY 2007. Also, the new CSREES Social Science Working Group has influenced solicitations for economic analyses, social inquiry, and human dimensions components in the NRI. In FY 2007, several new programs included social science priorities in their solicitations, e.g., the Managed Ecosystems program included a priority in Markets for Ecosystem Services.

QUALITY

Overall Quality

Agricultural Markets and Trade's Panel Recommendation

CSREES needs to work closely with land-grant universities to assure the highest quality research and education, communicate its strength within the scientific community, and revitalize the land-grant mission of high quality service to the Nation.

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008*
The Markets, Trade, Policy, and International Development portfolio is robust and has shown extensive interactivity within the land grant system. The CRIS System contains over 2200 funded research projects: 554 for KA 603, Market Economics; 642 in KA 604, Marketing and Distribution Practices; 328 for KA 606, International Trade and Development; 704 in KA 610, Domestic Policy; and 137 for KA 611 Foreign Policy and Programs. These include basic research, applied research, and developmental research. The overwhelming majority of the funded projects include multiple research foci.

Agency-funded research is comprehensive, including value chains that better define all market and trade functions and activities, and their implications for all participants in the domestic and global market, be it public, private, emerging or alternative.

Higher education funding is focused national needs for future Ph.D. economists who will in emerging areas such as energy economics and valuation of environmental services, the baccalaureate and M.S. focus includes preparation of students for agricultural business. Recruitment of female and minority students, and those from minority-serving institutions, continues to be important within the agricultural economics profession.

Extension outreach now focuses on business decision making, with equal emphasis on avoiding poor decisions and errors of omission, as making sound and economically justified ones. The commodity- or product- specific marketing activities epitomized by a previous generation of marketing economists, policy specialists, and development specialists is enhanced and expanded to ensure broader,

more diverse audiences develop the capacity to understand issues, gather and analyze information, and take personal responsibility for decision making, relying less of the recommendations of third parties.

Of 560 extension economists currently employed by U.S. land grant institutions, 120 (21 percent) are identified as marketing, trade, or policy economists. Another 53 (9 percent) hold agribusiness appointments that presumably include components of marketing and trade. Similar data are not currently available for research and teaching faculty.

- *Agricultural Markets and Trade's Portfolio Response in 2007:*
NPLs are heavily engaged with the profession to encourage high standards of relevance, quality and performance. Active measures include guidance in RFAs for competitive programs, review and suggestions for Plans of Work, merit and peer review of submitted proposals for competitive programs and congressional earmarks, and NPL review and approval of Hatch and other formula funded proposals. Less formal CSREES guidance is provided through communication with multistate research committees, project director's conferences, and interaction with professional association committees, C-FARE, National Association of Agricultural Economics Administrators, and the USDA Economists Group, and through routine communication with department heads, policy specialists, marketing economists, and extension economists.

NPLs serve as liaisons to each state to facilitate communication and responsiveness of the agency to Land-Grant partners. We have engaged in a structured, ongoing, system-wide discussion and debate about the future of the Land-Grant system and how CSREES can facilitate and respond effectively, and we are part of the efforts of NASULGC and CARET to revitalize the land grant mission and services.

- *Agricultural Markets and Trade's Portfolio Response in 2006:*
CSREES has identified National Program Leaders who will serve as liaisons to each state to facilitate communication and responsiveness of the agency to our Land-Grant partners. We have engaged in a structured, ongoing, system-wide discussion and debate about the future of the Land-Grant system and how CSREES can facilitate and respond effectively, and we are part of the efforts of NASULGC and CARET to revitalize the land grant mission and services.

Significance

Agricultural Markets and Trade's Panel Recommendation

Stakeholder needs are being met; however, relatively more attention should be given to projects that emphasize the "public good" rather than "private good."

Stakeholder needs are being met. Appropriate benefits are provided to stakeholders in foreign countries receiving development assistance but the benefits of such programs to U.S. stakeholders seem less clear.

International Economic Development's Panel Recommendation

Stakeholder needs are being met. Appropriate benefits are provided to stakeholders in foreign countries receiving development assistance but the benefits of such programs to U.S. stakeholders seem less clear.

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:* By its very nature, marketing, trade, and policy work results in public benefit. Agency-funded work is largely scale-neutral of agriculture, although the broad focus on distribution systems and value chains can be particularly important to small and medium sized producers, specialty crops, and alternative and value added enterprises (including biofuels and environmental goods and services).

To an extent some policies may be targeted to specific components of agriculture and natural resources; these are addressed appropriately. Economics is an integrating and decision-making science that addresses the “big picture” of how micro (firm level) decisions and outcomes and contribute to enhance the global public good.

The agency's International Science and Education (ISE) competitive grants program is in direct response to stakeholders' demands for funded activities that directly benefit U.S. institutions. Through last year, the agency has awarded 33 ISE grants – all aimed at bringing the benefits of foreign collaboration back to U.S. stakeholders. CSREES also supported the National Initiative to Internationalize Extension, a program designed to strengthen the international dimension of state and local extension services, thereby helping Americans succeed in today's global economy.

The significance of CSREES funded research is demonstrated by Multistate Research Committee NCCC-134, Applied Commodity Price Analysis, Forecasting, and Market Risk Management, peer reviewed research papers. The committee maintains an extensive archive of peer reviewed research papers on its heavily used web site. During the six month period October, 2007 to March, 2008, a total of 53, 549 page requests were received. The top 10 papers are summarized in the table below. The temporal spectrum of these papers confirms the lag and the extended utility of significant research, often extending well beyond the termination date of the funded research project. The breadth of these papers also illustrates the “public good” attributes of the Agency funded⁴ research.

Note the Year Presented data in the table below. This amply demonstrates the time lag that can occur between completion and presentation of research (output) and the use and application (outcome and impact), which can occur years after projects are terminated and CRIS reporting ceases. This is also a testament to the longevity of publically funded research.

⁴ Multistate research is usually, though not exclusively, funded through Hatch Act formula grants.

Top 10 Downloaded Price Analysis and Market Risk Management Research Papers, 6 Month Period, October 2007-March 2008				
Rank	Title	Author(s)	Year Presented	Requests
1	Meat Slaughter and Processing Plants' Traceability Levels Evidence From Iowa	Bulut & Lawrence	2007	820
2	A Calendar Spread Trading Simulation of Seasonal Processing Spreads	Cole, Kastens, Hampel, & Gow	1999	593
3	Volatility Models for Commodity Markets	Fackler & Tian	1999	533
4	Generalized Autoregressive Conditional Heteroskedasticity as a Model of the Distribution of Futures Returns	Brorsen & Yang	1989	413
5	The Effect of Ethanol Production on the U.S. National Corn Price	Park & Fortenbery	2007	369
6	A User's Guide to Understanding Basis and Basis Behavior In Multiple Component Federal Order Milk Markets	Thraen	2002	352
7	Pricing and Hedging European Options on Futures Spreads Using the Bachelier Spread Option Model	Schaefer	2002	301
8	Optimal Hedge Ratio Estimation	Myers & Thompson	1987	267
9	Futures Spread Risk in Soybean Hedge-to-Arrive Contracts	Blue, Hayenga, Lence & Baldwin	1998	250
10	Weather Derivatives: Managing Risk with Market-Based Instruments	Richards, Manfredo & Sanders	2002	246

Source: NCCC 134 <http://www.farmdoc.uiuc.edu/nccc134/paperarchive.html>

- *Agricultural Markets and Trade's Portfolio Response in 2007:*

The public good is addressed in common RFAs for competitive grants, and guidance for extension and research Plans of Work. Guidance in the NRI-RFA for social science proposals encourages investigators to examine long term impacts and measure aggregate societal benefits that serve the public good.

By nature marketing and policy work results in public benefit. In a democratic market based economy, individuals, families and firms make decisions and take actions that, in the aggregate, have macro outcomes and impacts. This is consistent with the integrated tripartite research-based model integrating knowledge generation, dispersion, and choices.

- *International Economic Development's Portfolio Response in 2007:*

2006 CSREES Response: The International Science and Education competitive grants program is designed to enhance the global competitiveness of the US agricultural sector. The program is still new and modestly funded. Nevertheless, some early results indicate that benefits are indeed flowing back to the US from international engagement. For example, Pennsylvania State University scientists and extension specialists are learning from European colleagues about state-of-the-art urban waste management and recycling. Also, our leadership on enhancing the global competencies of extension experts through the National Initiative to Internationalize

Extension is enabling those experts to better serve the needs of locally diverse populations, including immigrant populations.

Stakeholder/Constituent Inputs

Agricultural Markets and Trade's Panel Recommendation

Stakeholder input is at a high level, but there are times when some stakeholders have more influence than they should. CSREES and Land-Grant Universities need to do a better job of communicating stakeholder needs to individual faculty.

International Economic Development's Panel Recommendation:

Stakeholder input is at an acceptable level, but there are times when some stakeholders have more influence than they should. CSREES and Land-Grant universities need to do a better job of communicating stakeholder needs to individual faculty.

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:* The Agency and the land grant system have made significant efforts in reaching individual faculty. Agency NPLs are in constant contact with stakeholders. Input is sought from National Association of State Universities and Land-Grant Colleges, USDA National Agricultural Research, Extension, Education, and Economics Advisory Board, Council for Agricultural Science and Technology, Council for Agricultural Research, Extension, and Teaching, American Agricultural Economics Association and regional economics associations, Council for Food, Resource and Resource Economics, Association of Agricultural Economics Administrators, and others.

For the competitive grants programs, two internet based stakeholder workshops are conducted every year on the Tuesday after Thanksgiving in November. These workshops are advertised through C-FARE, Agricultural Economics Department Heads listserve, Rural Sociological Society, CSREES web site, ESCOP Social Sciences sub-committee, USDA-Economist Group listserve, etc. In 2007 about 80 people participated and an overwhelming majority expressed support for the NRI funding priorities. The entire proceedings are posted on CSREES Economics and Commerce Stakeholder Feedback web page.

Internally, NPLs are in routine communication with physical, biological and social scientists within the agency, the department and elsewhere in government. CSREES has the most comprehensive system in the nation for providing and seeking information from economists in the academy, industry and government

CSREES Listservers for Marketing, Trade, and Policy Communication, 2007	
Category	Subscribers
Department Heads	194
Economics Teachers	89
Extension Economists	540
Extension Educators	178
Marketing and Trade Economists	104
Policy Economists	98
USDA Economists	625
TOTAL	1828

- *Agricultural Markets and Trade's Portfolio Response in 2007*

There is no evidence of disproportionate stakeholder influence. Agency input is broadly solicited from the Council for Agricultural Science and Technology, the Council for Agricultural Research, Extension, and Teaching, the National Agricultural Research, Extension, Education, and Economics Advisory Board, the National Association of State Universities and Land-Grant Colleges and many other stakeholders.

CSREES NPLs actively participate in and contribute to the American Agricultural Economics Association, other international and regional economics associations, the Rural Sociological Society, the Association for Agricultural Education (and Communication), the Agriculture, Food, and Human Values Society, where they present CSREES displays, conduct grant and funding opportunities workshops, communicate science trajectories and solicit input for program design, and convey stakeholder needs to science faculty from land-grants institutions and other research, education, and outreach/extension providers.

ECS and F4-HN NPLs serve as liaisons to the ESCOP Social Science Subcommittee whose membership represents department chairs and members of the five traditional social science programs in the Colleges of Agriculture, agricultural economics, rural sociology, agricultural education, agricultural communication, and family ecology/family and consumer sciences.

- *Agricultural Markets and Trade's Portfolio Response in 2006:*

Information from the Council for Agricultural Science and Technology (CAST), the Council for Agricultural Research, Extension, and Teaching (CARET), the National Agricultural Research, Extension, Education, and Economics Advisory Board (NAREEEAB), the National Association of State Universities and Land-Grant Colleges (NASULGC) and other stakeholders is routinely provided to nearly 150 Agricultural Economics Department Heads and administrators via the CSREES list-server agecon-heads@lyris.csrees.usda.gov. A similar server, usdaecon@lyris.csrees.usda.gov, serves 275 USDA agricultural economists in all

agencies. Likewise, the agency maintains list servers for an array of social sciences that contribute to this portfolio. NPLs from CSREES serve as liaison to the ESCOP Social Science Subcommittee whose membership represents department chairs and members of the five traditional social science programs in the Colleges of Agriculture, agricultural economics, rural sociology, agricultural education, agricultural communication, and family ecology/family and consumer sciences. Additionally, NPLs actively participate and contribute to the American Agricultural Economics Association, the Rural Sociological Society, the Association for Agricultural Education (and Communication), the Agriculture, Food, and Human Values Society, where they present CSREES displays, conduct grant and funding opportunities workshops, communicate science trajectories and solicit input for program design, and convey stakeholder needs to science faculty from land-grants institutions and other research, education, and outreach/extension providers.

- *International Economic Development's Portfolio Response in 2007:*
Information from the Council for Agricultural Science and Technology (CAST), the Council for Agricultural Research, Extension, and Teaching (CARET), the National Agricultural Research, Extension, Education, and Economics Advisory Board (NAREEEAB), the National Association of State Universities and Land-Grant Colleges (NASULGC) and other stakeholders is routinely provided to nearly 150 Agricultural Economics Department Heads and administrators via the CSREES list-server. A similar list server serves 650 USDA agricultural economists in all agencies. Likewise, the agency maintains and NPLs use list servers for an array of social sciences that contribute to the International Economic Development Portfolio. NPLs from CSREES serve as liaison to the ESCOP Social Science Subcommittee whose membership represents department chairs and members of the five traditional social science programs in the Colleges of Agriculture, agricultural economics, rural sociology, agricultural education, agricultural communication, and family ecology/family and consumer sciences.

Additionally, NPLs actively participate and contribute to the American Agricultural Economics Association, the Rural Sociological Society, the Association for Agricultural Education (and Communication), the Agriculture, Food, and Human Values Society, where they present CSREES displays, conduct grant and funding opportunities workshops, communicate science trajectories and solicit input for program design, and convey stakeholder needs to science faculty from land-grants institutions and other research, education, and outreach/extension providers.

In addition, stakeholder input is systematically elicited for this portfolio from the following groups to identify research, education, extension, and development directions and priorities:

- ESCOP Social Science Subcommittee
- Council for Food, Agricultural and Resource Economics (C-FARE)
- American Agricultural Economics Association
- Rural Sociological Society
- Agriculture, Food, and Human Values Society

- American Association of Agricultural Educators and Communicators
- Public Policy Extension Educators
- Association of International Agriculture and Rural Development
- National Association of Community Development Extension Professionals
- Economic Research Service
- Foreign Agricultural Service
- Agricultural Marketing Service
- NASULGC's International Agriculture Section
- Association for International Agriculture and Rural Development
- Association for International Agricultural and Extension Education
- And NPLs and PSs in Economic and Community Systems, International Programs, the Social Science Working Group, and the Science for Sustainability Intra-agency Working Group

In 2006, the Competitive Programs unit of CSREES established an online tool for stakeholder input. It not only lists those organizations and individuals who have provided feedback and input in the past, but it is interactive and provides stakeholders an opportunity to provide feedback and input, including recommendations for research and integrated priorities for competitive programs such as the National Research Initiative, Small Business Innovation Research, and others. The URL for the website is: http://www.csrees.usda.gov/about/strat_plan_csrees.html; <http://webdev.csrees.usda.gov/business/reporting/stakeholder.html>.

With the addition of annual Project Director meetings, current awardees have a forum to express their views on how the programs are designed and conducted, the portfolio could better address the needs of their constituents and stakeholders, and what future priorities they would recommend.

Alignment

Agricultural Markets and Trade's Panel Recommendation

The alignment is generally good. Competitive grant projects (e.g., NRI) are more reflective of current science than are core-funded projects. The Panel is concerned that social scientists are much more critical than other scientists when judging competitive grant proposals; hence, a smaller proportion of proposals is deemed to be fundable. We are concerned that the phenomenon not be used as a signal to decrease funding allocated to this area at a time when socioeconomic issues increasingly drive the U.S. policy agenda reflecting citizens' concerns and needs.

International Economic Development's Panel Recommendation:

The alignment of portfolio projects with the current state of science-based knowledge and previous work is generally good. Competitive grant projects (e.g., NRI) are more reflective of current science than are core-funded projects. (Alignment and Current Science) The Panel is concerned that social scientists are much more critical than other scientists when judging competitive grant proposals; hence, a smaller proportion are deemed fundable. (Critical Nature of Social Science) We are concerned that this

phenomenon may be used as a justification to decrease funding allocated to this area at a time when socioeconomic issues increasingly drive the U.S. policy agenda. (Motivations for Funding Decisions) CSREES Response (Alignment and Current Science): NPLs from Competitive Programs develop requests for applications, assemble peer review panels, and provide oversight of the competitive review process; NPLs from the Economic and Community Systems unit review and approve incoming formula and congressionally mandated research proposals, including Multistate Projects and Evans-Allen research proposals related to international economic development, agricultural policy, trade, policy, and domestic policy. Appendices A and B identify the most recent projects added to the portfolio and their titles should provide additional evidence of the currency of science reflected in core-funded projects.

Currency of science in the NRI programs related to this portfolio is maintained through input from more than two dozen stakeholder groups who help identify long-standing critical and emerging issues in international economic development, trade policy, and domestic agricultural and rural policy, and as a consequence, the portfolio has had a broad base traditionally. Applicants from more than 20 disciplines send research proposals to the Markets and Trade program of the National Research Initiative. In addition to economists, agricultural economists, applied economists, resource economists, environmental economists, development economists, management economists, and food economists, the portfolio of applications to Markets and Trade come from the following disciplines:

1. Agribusiness
2. Aquaculture and Fisheries
3. Biological Sciences
4. Business
5. Public Administration
6. Community Development
7. Environmental and Earth Sciences
8. Family and Consumer Science
9. Food Policy
10. Food Science, Innovation, and Technology
11. Forest Ecology, Forest Products, and Forest Resources
12. Forest and Wildlife Sciences
13. Geography
14. Global Development and International Research
15. Human Environment and Design
16. Management
17. Mathematics
18. Natural Resources and Conservation
19. Political Science
20. Regional Analysis and Public Policy Research
21. Rural Sociology
22. Urban and Regional Planning

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:* Core-funded (formula) projects are on a level of science that is equal to that of competitively funded programs. The proportion of competitively funded and formula funded research that is published in the top tier agricultural economics journal (*American Journal of Agricultural Economics*) is approximately the same for both funding mechanisms.

A soon-to-be-released study by the USDA Economic Research Service will report that the proportion of formula funded and special (congressional earmark) funded research reported in the Current Research Information System as basic research (as opposed to applied research and developmental research) is actually higher than that for CSREES competitive funded economics research grants.

All agency funded economics work, regardless of authorization or funding mechanism, is subject to vetting through either peer review or merit review. The review includes scrutiny of the use of current and appropriate scientific methods, and for adherence to established protocols for treatment of human subjects.

The problem of low funding success for competitive programs has been corrected. The Agribusiness Markets and Trade and Rural Development programs of the NRI are now offered in a biannual basis (with accumulated funding) and the results have been positive.

Impacts of NRI 61.0 and 62.0 Programs Being Offered Every Other Year				
61.0 Agribusiness Markets and Trade	2005	2006	2007	2008
Total Funding	\$2,200,000		\$5,100,000	
# of Submissions	43		60	
# of Awards	11		18	
Success Rate	25.6%		30%	
Average Grant Size	\$200,000		\$283,333	
# Graduate Students Supported	13		22	
62.0 Rural Development				
Total Funding	\$2,400,000	\$4,131,000		\$5,100,000
# of Submissions	42	59		49
# of Awards	7	12		
Success Rate	16.7%	20.3%		
Average grant size	\$342,857	\$344,250		
# Graduate Students Supported	7	15		

Note: Number of awards and success rates exclude conference grants.

- *Agricultural Markets and Trade's Portfolio Response in 2007:* Formula funded research covers a broader, more comprehensive portfolio than the NRI and other competitive programs. Review and approval of Hatch and Evans-Allen research proposals received suggests that these projects strongly reflect the current of

state of science, and that appropriate theoretical and contemporary methodologies, including experimental markets, prediction markets and contingent valuation and conjoint analysis for neoteric products, are employed in the area of markets and trade. This is clearly supported by the consistently high number of top tier journal (including American Journal of Agricultural Economics) and regional journal articles resulting from Hatch funded research.

Currency of science in the NRI programs related to this portfolio is maintained through input from more than two dozen stakeholder groups who help identify long-standing critical and emerging issues in international economic development, trade policy, and domestic agricultural and rural policy, and as a consequence, the portfolio has had a broad base traditionally. Applicants from more than 20 disciplines send research proposals to the Markets and Trade program of the National Research Initiative

Awards competition for Agricultural Prosperity for Small and Medium Sized Farms program is conducted annually. Funding rates for this program increased from 20 percent in 2005 to 38 percent in 2006. In response to stakeholder concerns, outreach and changes to the application submission dates were made.

CSREES now offers the Markets and Trade NRI program in alternate years (with no change in the funding levels) to provide efficient use of time and human capital for CSREES and the science community. The program was not competed in 2006.

- *Agricultural Markets and Trade's Portfolio Response in 2006:*
Formula Funded Projects
The NPL review and approval of 25 incoming Hatch research proposals, including Multi-State, (see table below), and Evans-Allen research proposals received throughout 2005 suggests that the proposed projects do reflect the current of science, and that appropriate theoretical and contemporary methodologies, including experimental markets, prediction markets, and contingent valuation and conjoint analysis for neoteric products, are being employed in the area of markets and trade. Several newly approved Hatch projects focus on developing survey data derived from primary data sources for use in marketing and trade research.
- *International Economic Development's Portfolio Response in 2007:*
CSREES Response (Critical Nature of Social Science): In 2006, CSREES decided to offer Rural Development and Markets and Trade programs in alternate years with no change in the funding levels. The reason for changing to alternate years is to provide for more efficient use of time and human capital for both the scientific community and CSREES. The funding rate increased from 19% in 2005 to 22% in 2006. This data and feedback from stakeholders are being closely monitored.

Awards competition for the Agricultural Prosperity for Small and Medium Sized Farms program is conducted annually. Funding rate for this program increased from 20% in 2005 to 38% in 2006 because of a large reduction in applications received. In

response to stakeholder concerns, more outreach and changes to the application submission dates were made FY 2007.

One repercussion of the decision to offer Agricultural Markets and Trade every other year is that the program was not competed in 2006. It therefore did not contribute new projects to the International Economic Development or Trade Capacity Development portfolio this year as it has done annually in the past.

Methodology

Agricultural Markets and Trade's Panel Recommendation

Current and appropriate methodologies are used in research, teaching, and extension.

International Economic Development's Panel Recommendation:

Current and appropriate methodologies are used in research, teaching, and extension. International development work draws upon state of the art expertise, approaches and methods from university partner institutions, and is shaped in concert with USAID, MCC, USDA/FAS and other internationally focused stakeholders. Nevertheless, the Portfolio is "uneven" in use of appropriate and cutting edge methodologies due to institutional constraints posed for contracts versus grants; that is, some funding mechanisms allow for more nimble responses to emerging and emergency issues, while some are more risk averse which reduces their ability to product cutting-edge solutions.

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:*
The need for appropriate methods is specified in all CSREES RFAs, and is a selection criterion of peer review panels ranking proposals and for NPL review of formula funds proposals, Plans of Work, and special and administrative grants. It is also an expectation of high quality research, teaching and extension work required for promotion and tenure within the academy. Given the highly competitive nature of funding programs, proposals that do not justify appropriate methodologies have a very low probability of surviving the peer and merit review processes.
- *Agricultural Markets and Trade's Portfolio Response in 2007:*
The need for appropriate methods is specified in all CSREES RFAs, and is a selection criterion of peer review panels ranking proposals and for NPL review of formula funds proposals, Plans of Work, and special and administrative grants. Future RFAs for Integrated Programs (teaching, research, and extension) specify the need for current appropriate teaching, research and extension methods, as per recommendations from the Developing and Implementing Integrated Research, Education, and Extension Projects: Lessons from our Partners Workshop.

Due to tripartite mission, a variety of methodologies are required for basic and applied research, undergraduate and graduate teaching, and for extension outreach. NPLs take care to elicit proper methodologies and peer and merit review includes attention to proposed methods. Economics as a discipline is unique in the inclusion of KA 609, Economic Theory and Methods as a discrete Knowledge Area, and there

is a multistate research committee (NC-1034, Impact Analysis & Decision Strategies for Agricultural Research) that is dedicated explicitly to focus on the scientific assessment and evaluation of agricultural research.

International development work draws upon state of the art expertise, approaches and methods from university partner institutions, and is shaped in concert with USAID, MCC, USDA/FAS and other internationally focused stakeholders. Nevertheless, the Portfolio is “uneven” in use of appropriate and cutting edge methodologies due to institutional constraints posed for contracts versus grants; that is, some funding mechanisms allow for more nimble responses to emerging and emergency issues, while some are more risk averse which reduces their ability to product cutting-edge solutions.

- *Agricultural Markets and Trade’s Portfolio Response in 2006:*
The need for appropriate methods is specified in all CSREES Requests for Applications, and is a selection criterion considered by all peer review panels ranking proposals. Future RFAs for Integrated Programs (teaching, research, and extension) will specify the need for current appropriate teaching, research, and extension methods, as per recent recommendations from the Developing and Implementing Integrated Research, Education, and Extension Projects: Lessons from our Partners Workshop, 30 August 2005, at CSREES Headquarters in Washington, DC.

PERFORMANCE

Productivity

Agricultural Markets and Trade’s Panel Recommendation

The portfolio has visibility despite few leadership resources devoted to it.

International Economic Development’s Panel Recommendation:

The portfolio has visibility despite the lack of leadership resources devoted to it. CSREES Response: The International Programs office continued to enhance its visibility last year by providing leadership on new, high-profile projects, as well as expanding its role on initiatives launched before 2006. This, in spite of the loss of one NPL and one Program Specialist. The office played a leading role in the planning and implementation of the Iraq Agricultural Extension Revitalization project that was announced by the Secretary of Agriculture. Launched in late 2006, the project is being closely watched by the State Department, White House officials, the university community and the media. The International Programs office has also been a leader in the Agricultural Knowledge Initiative with India. Due to the increasing role that India is playing in the world’s markets, this project is also garnering attention nationwide. The office’s leadership for the National Initiative to Internationalize Extension has highlighted the need to strengthen the international dimension of local extension programming. Land-grant partners across the country have developed new programs and increased their emphasis in this area as a result of the Initiative.

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:* Due to the diligence of CSREES professional and support staff, the Markets, Trade, Policy, and International Development portfolio is both highly productive and highly visible. By efficiently using its resources, CSREES has worked hard to integrate as appropriate and to enhance linkages between all portfolios and across all strategic goals and objectives.

The CSREES economics staff is maintaining its visibility and increasing its leadership role, to the extent possible with existing resources.

The portfolio has benefitted immensely by the replacement of the NPL for Farm Financial Management. The linkage between the marketing and management portfolios is stronger than it has been for a decade, and the two program areas enjoy a high degree of cooperation and improved service to existing and new constituencies.

- *Agricultural Markets and Trade's Portfolio Response in 2007:* To increase attribution of Agricultural Markets and Trade Portfolio outputs, Agricultural Economics and related department heads, principal investigators, and journal editors have all been reminded on numerous occasions of the critical importance of including appropriate attribution statements for all CSREES-funded outputs. Major journals now include instructions to submitting authors to specifically include funding attribution. In a recent issue of the American Journal of Agricultural Economics one third of published articles made reference to CSREES funding. Fully 60 percent of those citing funding sources included CSREES funding. Several major journals have subsequently updated their submission criteria to include funding attribution.

The ESCOP Social Science Subcommittee and C-FARE have improved the visibility of all social science projects. Likewise, CSREES works closely with the Markets, Trade, and Economics Division of the Economic Research Service and with other agencies to maintain high visibility for this portfolio and to effectively distribute outputs.

The portfolio has visibility despite the lack of leadership resources devoted to it. CSREES Response: The International Programs office continued to enhance its visibility last year by providing leadership on new, high-profile projects, as well as expanding its role on initiatives launched before 2006. This is in spite of the loss of one NPL and one Program Specialist. The office played a leading role in the planning and implementation of the Iraq Agricultural Extension Revitalization project that was announced by the Secretary of Agriculture. Launched in late 2006, the project is being closely watched by the State Department, White House officials, the university community and the media. The International Programs office has also been a leader in the Agricultural Knowledge Initiative with India. Due to the increasing role that India is playing in the world's markets, this project is also garnering attention nationwide. The office's leadership for the National Initiative to Internationalize Extension has highlighted the need to strengthen the international dimension of local extension

programming. Land-grant partners across the country have developed new programs and increased their emphasis in this area as a result of the Initiative.

- *Agricultural Markets and Trade's Portfolio Response in 2006:*
To increase attribution of Portfolio 1.1 outputs, Agricultural Economics and related department heads, principal investigators, and journal editors have all been reminded of the critical importance of including appropriate attribution statements for all CSREES-funded outputs (See Portfolio Accountability, below). The ESCOP Social Science Subcommittee and C-FARE have improved the visibility of all social science projects. Likewise, CSREES works closely with the Markets, Trade, and Economics Division of the Economic Research Service and with the USDA Risk Management Agency to maintain high visibility for this portfolio.

Timeliness

Agricultural Markets and Trade's Panel Recommendation

Most projects are completed on time. However, Hatch research projects should be monitored more closely for achieving goals by expected completion dates. Furthermore, some Hatch projects may be allowed to continue for too many years.

International Economic Development's Panel Recommendation:

Most projects are completed and on time. However, Hatch projects should be monitored more closely to ensure they achieve goals by expected completion dates. Furthermore, some Hatch projects may be allowed to continue for too many years.

- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:*
During the past year there were no requested extensions beyond the normal institution determined no-cost ones that are typically requested to account for end-of-year funds. This provides evidence that there are no problems with the timely completion of Hatch-funded work.
- *Agricultural Markets and Trade's Portfolio Response in 2007:*
One year no-cost extensions are a common phenomenon in all types of publicly-funded research due to the uncertain nature of the flow of outputs and research results. Terms and Conditions state that such time extensions may be routinely granted at the discretion and request of the grant recipient institution without prior approval. No additional extension requests were received, indicating that there are no problems with timely completion of funded work.

Timelines for international development activities are specified in agreements with universities. Such agreements may involve placement of university experts on assignment overseas for a specified period of time. In most cases, assignments are completed by the agreement end date. Occasionally, work requirements exceed the originally described activities, in which case a new agreement is negotiated.

NPLs increased monitoring of economics (600 series Knowledge Area) Hatch and competitively funded reported in CRIS and improved post-award project management. Several low performing projects have been terminated as a result of NPL discussions with PIs and department heads; several others were revised and updated after funding approval was deferred. Faculty, department heads and journal editors are on notice that high levels of productivity and attribution are expected commitments to the receipt of federal funding.

- *Agricultural Markets and Trade's Portfolio Response in 2006:*
One year no-cost extensions are a fairly common phenomenon in all types of publicly-funded research, due to the uncertain nature of the flow of outputs and research results. CSREES Terms and Conditions clearly state that such extensions may be granted at the discretion and request of the recipient institution without prior approval (<http://www.csrees.usda.gov/business/awards/awardterms.html>). ECS has increased monitoring of economics (600 series Research Problem Area) related Hatch and other funded projects as reported in CRIS, and we have improved post-award management throughout CSREES.
- *International Economic Development's Portfolio Response in 2007:*
Timelines for CSREES' international development activities are specified in agreements with universities. Such agreements may involve placement of university experts on assignment overseas for a specified period of time. In most cases, assignments are completed by the agreement end date. Occasionally, work requirements exceed the originally described activities, in which case a new agreement is negotiated.

The use of no-cost extensions is not an indicator of performance failure, but rather is a mechanism for retaining the balance of project budgets for use in creative dissemination of research project findings. The CSREES Terms and Conditions clearly state that one year no-cost extensions may be granted at the discretion and request of the recipient institution without prior approval (<http://www.csrees.usda.gov/business/awards/awardterms.html>). As expectations to measure and report long-term impacts of the research, education, and extension projects funded in this portfolio, this mechanism will become more important. To summarily deny no cost extensions would severely limit our ability to expand on project results, promote program visibility, and measure future impacts.

Agency Guidance

Agricultural Markets and Trade's Panel Recommendation

There is an immediate need for leadership in the area of economics (Economic and Community Systems Deputy Administrator and economics NPLs). It is incomprehensible that economics programs have been allowed to languish with declining leadership of economists over the last five years. There is also a need to strengthen overall strategic leadership in economics programs across the portfolio. Economists

could make significant contributions to addressing critical agricultural and societal issues and should be fully engaged with other NPLs.

CSREES is doing a good job of managing “pass-through” funds for development assistance projects, but strategic leadership for the entire program is clearly needed.

International Economic Development’s Panel Recommendation:

CSREES is doing a good job of managing “pass-through” funds for development assistance projects, but strategic leadership for the entire program is clearly needed.

There is an immediate need for leadership in the area of economics (ECS Deputy Administrator and economics NPLs). It is incomprehensible that the economics programs have been allowed to languish with declining leadership over the past five years. There is also a need to strengthen overall strategic leadership in economics programs across the portfolio. Economists could make significant contributions by addressing critical agricultural and societal issues and should be fully engaged with other NPLs.

- *Markets, Trade, Policy, and International Development’s Portfolio Response in 2008:* Economics leadership, although modest in terms of numbers, is alive and growing at CSREES. The Agency has committed funding for a comprehensive meeting with the office of the Administrator and top agricultural and resource economists from around the nation to define the role and scope of CSREES economics over the next 15 years. Dr. John Lee, former Administrator, Economic Research Service, and Dr. Otto Doering, President, American Agricultural Economics Association, will lead the effort. This project is especially timely given passage of the new farm bill requiring restructuring of CSREES and a changing alignment with other Research, Education and Economics agencies in USDA.

The integration of economics within CSREES competitive grant programs is stronger than it has ever been; a measure of success is the increasing number of NRI and other competitive grants programs that include economic components, and increasing requests from non-economist NPLs for economists to participate on peer review panels.

Over the past year, economists have actively led and participated in critical CSREES internal activities including the Social Science Working Group, the Ecosystems Services Working Group, and the Social Science Academy.

Externally, NPLs have made invited presentation at national and international meetings, served the American Agricultural Economics Association, C-FARE, the Association of Agricultural Economics Administrators, and the USDA Economists Group.

- *Agricultural Markets and Trade’s Portfolio Response in 2007:* CSREES economics programs are in a maintenance mode. Previous organizational structure which provided for economists to represent areas of emphasis has been significantly diminished. The three remaining economist National Program Leaders, with about 2.5 FTE dedicated to economics, are called upon to cover many areas to

support the workload, leaving limited time for leadership in all specific and emerging topic areas.

They work with other units, especially Plant and Animal Systems, Natural Resources and Environment, Families, 4-H and Nutrition. The advisory capacity of the Social Science Working Group strengthens internal leadership, coordination and collaboration in the area of economics. Economics and Community Systems economics NPLs spend a considerable amount of time on basic activities like Hatch and special project administration, institutional reviews, and multistate committees, leaving limited time for developing more strategic and innovative linkages with other units dealing with emerging topics and opportunities.

Leadership of the international portfolio, and management of development assistance projects, is centered in the International Programs division of the Science and Education Resource Development unit of CSREES. National Programs Leaders from Economic and Community Systems and Competitive Programs administer programs that constitute and complement development assistance and land-grant capacity-building with international economic development and trade and domestic agricultural and rural policy. Leaders in SERD manage development assistance in 5 countries in Africa and the Middle East, and they administer the ISE competitive grant program to build international capacity among land-grant partners. Leaders in ECS manage core and special grants on international research, including Hatch and Evans-Allen research projects. Leaders in Competitive Programs administer two programs in the NRI—Markets and Trade, and Rural Development—and two programs in SBIR—Marketing and Trade, and Rural and Community Development—all of which contribute significantly to the research, product, and service base of international economic development and policy.

International Programs in SERD collaborates with USAID and the Millennium Challenge Corporation, their chief funding source, as well as with the Foreign Agricultural Service and the Agricultural Marketing Service. Competitive Programs that contribute to this portfolio cooperate closely with the Markets and Trade Economics Division of ERS, and well as with the newly reorganized Resource and Rural Economics Division of the Economic Research Service.

CSREES Economist Human Resources, Late 1990s to 2007		
NPL Focus	Change	Outcome
Farm Management	Retired 2002	Replaced by Farm Financial Management
Farm Financial Management	ECS 2002 Retired 2007	Replaced by Ag Lawyer - Risk Management Education, Trade Adjustment Assistance, & Farm Financial Management
Domestic Marketing	ECS 1995 To HEP 1998 To ECS 2005	ECS position vacant 1999 – 2004

CSREES Economist Human Resources, Late 1990s to 2007		
Global Marketing	ECS 1995 Retired 2002	Not replaced
Natural Resource Economics	ECS 1996	
Social Science, Competitive Programs	To CP 2003	
International Trade & Policy	ECS 1997 Resigned 1999	Not replaced
Agricultural Policy	ECS 1995 Retired 1999	Replaced by Family Economist - Urban Programs; Public Policy; Rural & Community Development
Economic Development	ECS 1995 Retired 1999	Not replaced

CSREES NPLs trained in economics: 8 in 1997; 7 in 1999; 6 in 2001; 4 in 2004; 3 in 2008.

While the quality, relevance and performance of the portfolio remains high, CSREES economics leadership sustainability remains at risk. Due to realignment and attrition, the agency has diminished coverage in farm management, production economics, finance, tax, agricultural policy, and developmental economics, although work in these areas continues at land grant and AASCARR institutions. This effect is compounded as the agricultural economics profession is going through a significant re-evaluation.

Nevertheless, CSREES economist NPLs remain highly involved throughout the profession. To the extent possible with limited personnel, CSREES maintains links with the Economic Research Service, Agricultural marketing Service, Farm Service Agency, Risk Management Agency, Foreign Agricultural Service, Natural Resources Conservation Service, and other USDA agencies. They serve a number of functions with the American Agricultural Economics Association and regional and international associations, and they interact routinely with the Council on Food and Resource Economics, Farm Foundation, National Association of Agricultural Economics Administrators, and the USDA Economists Group.

The ECS and CP leadership has been engaged with economics leadership. Deputy Directors in ECS and CP have participated in and presented at C-FARE meetings, agricultural economics department head meetings, and ESCOP Social Science Committee meetings. The ECS Deputy administrator has given two papers at the AAEEA; ECS sponsored one of best attended sessions at the 2007 American Agricultural Economics Association meeting, and also gave a presentation at recent international land use conference. Economist NPLs have given papers, presided over and participated in symposia at AAEEA meetings. National Program Leaders in CP,

NRE, and ECS have been very active with agricultural economics department heads and in attending meetings, giving presentations, and conducting discussion sessions.

- *Agricultural Markets and Trade's Portfolio Response in 2006:*

A new Economic and Community Systems Deputy Administrator was hired in April 2005, and a new ECS Markets & Trade National Program Leader was assigned in May 2005. With the departure of an ECS Program Assistant to begin Ph.D. study in agricultural economics, the unit has received approval to refill the position.

ECS National Program Leaders work more closely with other CSREES units, especially Plant and Animal Systems, Natural Resources and Environment, Families, 4-H and Nutrition, and Competitive Programs. The advisory capacity of the new Social Science Working Group should also strengthen leadership, coordination, and collaboration in the area of economics. Similarly, social science leadership will potentially be strengthened for the 20 plus other disciplines represented by this portfolio.

The ECS unit has increased CSREES presence in American Agricultural Economics Association, including use of the CSREES Display at the annual AAEA meeting, sponsoring an organized symposium, and the election of the newly assigned Markets and Trade NPL to the AAEA Extension Section Board.

The ECS NPLs continue to review, approve and monitor multi-state and special research projects, and serve as CSREES liaisons to regional economics committees. We have expanded links with the USDA Economic Research Service, for example by co-funding and preparing a publication on the Future of Animal Agriculture, in cooperation with the Farm Foundation.

Guidance regarding the revised configuration of the National Research Initiative Markets and Trade programs was distributed directly to Agricultural Economics department heads as soon as administrative decisions were made to help them anticipate changing program needs and priorities.

National Program Leaders responsible for this portfolio have increased their attendance, participation, and sponsorship of meeting sessions for CSREES-funded projects, conducted recent surveys of past awardees to elicit subsequent impacts of their research, accelerated the collection and dissemination of publication and presentation materials resulting from award projects, increased the number of site visits to ongoing projects, and are currently organizing Project Director meetings to bring awardees together to network, foster synergies, and train in impact assessment and reporting. Pending budget constraints may slow progress toward these efforts however.

- *International Economic Development's Portfolio Response in 2007:*

Leadership of the international portfolio, and management of development assistance projects, is centered in the International Programs division of the Science and

Education Resource Development unit of CSREES. National Programs Leaders from Economic and Community Systems and Competitive Programs administer programs that constitute and complement development assistance and land-grant capacity-building with international economic development and trade and domestic agricultural and rural policy. Leaders in SERD manage development assistance in 5 countries in Africa and the Middle East, and they administer the ISE competitive grant program to build international capacity among land-grant partners. Leaders in ECS manage core and special grants on international research, including Hatch and Evans-Allen research projects. Leaders in Competitive Programs administer two programs in the NRI—Markets and Trade, and Rural Development—and two programs in SBIR—Marketing and Trade, and Rural and Community Development—all of which contribute significantly to the research, product, and service base of international economic development and policy.

International Programs in SERD collaborates with USAID and the Millennium Challenge Corporation, their chief funding source, as well as with the Foreign Agricultural Service and the Agricultural Marketing Service. Competitive Programs that contribute to this portfolio cooperate closely with the Markets and Trade Economics Division of ERS, and well as with the newly reorganized Resource and Rural Economics Division of the Economic Research Service.

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and reporting. Pending budget constraints may slow progress toward these efforts however. Guidance regarding the revised configuration of the National Research Initiative Markets and Trade and Rural Development programs was distributed directly to Agricultural Economics department heads as soon as administrative decisions were made to help them anticipate changing program needs and priorities.

A new Economic and Community Systems Deputy Administrator was hired in April 2005, and a new ECS Markets & Trade National Program Leader was assigned in May 2005.

The Risk Management and Trade Adjustment position vacancy created by the retirement of Agricultural Economist, Dr. Mark Bailey, was filled in April, 2007 by Dr. Janie Hipp, an expert in agricultural law. Bruce McWilliams, an Agricultural Economist in the Planning and Accountability unit resigned CSREES to join USDA/OPBA. No CSREES hires of agricultural economists are anticipated in the near future, however, two of the Program Specialists in the Economic and Community Systems unit are now preparing to pursuing advanced degrees in Economics and Agricultural Economics, enhancing the economic analytical capacity of the unit.

Accountability

Agricultural Markets and Trade's Panel Recommendation:

There is a critical need to be able to report outputs and impacts according to criteria established by CSREES for meeting OMB requirements, and a need to effectively communicate the impact of CSREES programs to all stakeholders via scholarly and stakeholder-oriented communication channels. Teaching and extension activities need to be included. An improved post-award evaluation process needs to be implemented.

International Economic Development's Panel Recommendation:

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- *Markets, Trade, Policy and International Development's Portfolio Response in 2008:* The CRIS database is migrating to a relational platform, and this will require a change in the search engine. All search interfaces to records in the database will change. These include all direct accesses through the web site (Assisted, Professional, Pending, Administrative), as well as all "indirect" accesses through "Fastlinks." These are hyperlinks to one or more records in the CRIS database that may be added to any web page, email, word processing document, spreadsheet, PDF file, etc.

Software to access the database has not been identified, but there will be differences in functionality. Some functionality will change, there will be new features, and some

features currently available may not be available. The change will affect all aspects of interacting with the database, including searching, displaying, printing, and downloading.

Data input forms have been changed to include a broader scope of scholarly activity, outputs and impacts. They are more relevant and inclusive of education and extension work. All reports will be mapped against the logic model which will make the identification and reporting of impacts much more efficient.

- *Agricultural Markets and Trade's Portfolio Response in 2007:*
Significant progress has been made improving the reporting of outputs, outcomes and impacts. Attribution of funding is a priority. Updates to the CRIS reporting system include more inclusive reporting of scholarly outputs beyond serial publications (journal articles) and books; this substantially increases the opportunity to report teaching and extension outputs. Improved review and oversight of CRIS and Plan of Work reports has been accomplished. This has resulted in the refocus of project efforts and in some cases the termination of products with limited productivity.

CSREES is refining post-award management processes and procedures, along with development of Customer Service Standards and new NPL Guidelines for Reviewing Hatch, McIntire-Stennis, Evans-Allen, and Animal Health and Disease Proposals.

Project Directors meetings are a required component of competitive funding, and PIs are expected to include sufficient funding in their proposed budgets, and to attend such meetings as scheduled throughout the effective life of their funded projects.

- *Agricultural Markets and Trade's Portfolio Response 2006:*
There has been significant progress made towards improving the reporting of outputs and impacts. Three technological initiatives and an organizational one have taken place in this area. "One Solution" a government-wide federal access and reporting system with a non-redundant, single-point-of-entry processing is now coming on-line. The two other new efforts include the development of "eXtension;" and the electronic extension plan of work reporting system. In conjunction with the creation of new Knowledge Area categories - a common taxonomy and reporting codes for all three CSREES functions - these innovations provide a means of more quickly and precisely producing reports for individuals in combined higher education, research, and extension programs in an integrated manner. This is expected to make Agency-sponsored and funded work much more transparent and comprehensible to partners, lawmakers, and the public.

Over the past several years CSREES has been steadily refining its post-award management processes and procedures, along with the development of specific Customer Service Standards and new National Program Leader Guidelines for Reviewing Hatch, McIntire-Stennis, Evans-Allen, and Animal Health and Disease Proposals.

- *International Economic Development's Portfolio Response in 2007:*
CSREES Response: The new Knowledge Areas (KAs) and new electronic extension Plan of Work (POW) reporting system, along with the introduction of OneSolution, a non-redundant, single-point-of-entry processing and reporting system, should enhance our capacity to report outcomes and impacts. Using a common taxonomy and common reporting codes for all three CSREES functions will provide the opportunity to report individual or combined research, higher education, and extension programs and projects in an integrated manner that is expected to make Agency-sponsored and funded work more transparent and comprehensible to partners, lawmakers, and the public. April 2008 is the deadline for the new electronic extension POW and annual reporting. We are also following the active discussion within the development community about the need to enhance monitoring and evaluation of processes.

Over the past several years, CSREES has been steadily refining its post-award management processes and procedures, along with the development of specific Customer Service Standards and new National Program Leader Guidelines for Reviewing Hatch, McIntire-Stennis, Evans-Allen, and Animal Health and Disease Proposals.

Travel budgets of the NRI program directors have more than quadrupled since 2003, allowing National Program Leaders to conduct more site visits, attend funded-research presentations, and discuss outcomes and prospective impacts with awardees. CSREES is also developing new tools and methods to identify and measure future program impacts.

An effort is underway to inform all NRI and other CSREES awardees, plus Agricultural Economics department heads, faculty, journal editors, and representatives of the 20+ disciplines that contribute to this portfolio of the requirement for attribution of CSREES funding in published work. Appendix D provides a sample of the "Acknowledgement Letter" which is sent to every NRI award Project Director twice annually.

Section V: Self-Assessment

Portfolio Scores- These two portfolios were part of three portfolios scored as a single portfolio in 2004. They were split in 2006 but recombined in one portfolio in 2008. It was renamed Markets, Trade, Policy, and International Development. The new score is 83 shown in the last column

Agricultural Markets and Trade				International Economic Development			Markets, Trade, Policy, & International Development
	Panel Score	2006 Score	2007 Score	Panel Score	2006 Score	2007 Score	2008 Score for the combined portfolio
<i>Relevance</i>							
1. Scope	2	3	3	2	2	2	2.5
2. Focus	2	1	1.5	2	2	2	2
3. Emerging Issues	2	2	2	2	2	2.5	2.5
4. Integration	3	3	3	3	2	2.5	2.5
5. Multi-disciplinary	3	3	3	3	3	3	3
<i>Quality</i>							
1. Significance	2	2	2	2	3	2	2
2. Stakeholder	2	3	3	2	2	2.5	3
3. Alignment	2	2	2	2	3	2.5	2.5
4. Methodology	2	2	2	2	3	2.5	2.5
<i>Performance</i>							
1. Productivity	3	3	3	3	2	3	3
2. Comprehensive ness	2	2	2	2	1	2	2
3. Timeliness	2	2	2	2	3	3	3
4. Agency guidance	1	2	1.5	1	2	2	2
5. Accountability	1	1	2	1	2	2.5	2
Overall score *	69	81	78	69	75	79	83

* The overall score is based on weighted calculations

2008 Markets, Trade, Policy and International Development Portfolio Score Change

Discussion:

The 2008 weighted score for the newly combined portfolio is 83. The comprehensiveness of this portfolio is much better described as a result of combining marketing, trade, policy and development. The consolidation also makes more efficient use of our limited human resources to ensure that all components of the portfolio receive adequate attention and leadership. The combined portfolio was scored as an entity, and the resulting scores are not averages of the individual components, nor are they an attempt to “split the difference” between proportionate previous scores.

The scope, emerging issues and integration of the portfolio are judged to be quite good, though not exceptional, given the resource allocations and the breadth of the portfolio. The overall focus is adequate, and the disciplinary balance is high.

The panel discussed the issue of significance at length, specifically whether the term refers primarily to the scientific (statistical) significance of findings, or more broadly to applicability and direct use of the outputs of the portfolio. While the former is considered to be high, the latter was perceived as adequate, with room for improvement. Portfolio alignment and methodology were both scored as beyond adequate.

Comprehensiveness, agency guidance, and accountability were all rated as satisfactory; the internal panel noted that given existing human capital resources, it is difficult to sustain an adequate level of performance. NPLs noted the difficult trade-off between program leadership, project management, and accountability processes, and stressed the importance of not allowing program leadership to devolve into a residual claimant on NPLs time.

2007 Agricultural Markets and Trade Portfolio Score Change Discussion:

The original score of the external review panel for the entire Goal 1 portfolio was 75. The score from the internal review of just the Agricultural Markets and Trade Portfolio in November 2005 was 81. The 2007 internal review score for Agricultural Markets and Trade Portfolio is 78. While there was no degradation in portfolio quality, relevance or productivity, the reduction reflects a slight decline (0.5 score reduction) in two areas: focus and agency guidance. Both are the result of constrained capacity of existing NPLs to maintain the core of the portfolio and to forge ahead with expanded and new topics to the degree that they like to. The overall 5 point portfolio score reduction is due to the weighting factors applied in computing the final score.

2006 Agricultural Markets and Trade Portfolio Score Change Discussion:

The original score of the external review panel for the entire Goal 1 portfolio was 75. The score from the internal review of just Portfolio 1.1 in November 2005 was 83. In response to the recommendations of the Objective 1.1 Portfolio Review Panel CSREES has taken a number of comprehensive steps to enhance the quality, relevance and performance of the Markets and Trade portfolio.

Most importantly, aggressive steps have been taken to enhance Agency leadership in the economics arena. A new Deputy Administrator was hired and a new National Program Leader was assigned. CSREES visibility and participation in the American Agricultural Economics Association has been improved.

The CSREES OneSolution effort is substantially improving the grants application, reporting and data management, and the Current Research Information System is being through the use of more comprehensive reporting taxonomies and coding systems that include higher education and extension work. Post award management of funded activities is being improved, and a thoroughly revised plan of work process is being introduced.

Newly funded research is more carefully monitored to ensure state of the art methods are employed, and for continued relevance, outputs, impacts, and visibility. Annual and termination CRIS reports are monitored to ensure that work progresses in a satisfactory manner, that outputs are documented, and that actions are completed on time, and that impacts are assessed, captured, and reported.

Appendix A – External Panel Recommendations to the Agency:

In response to directives from the Office of Management and Budget (OMB) of the President, CSREES implemented the Portfolio Review Expert Panel (PREP) process to systematically review its progress in achieving its mission. Since this process began in 2003, fourteen expert review panels have been convened and each has published a report offering recommendations and guidance. These external reviews occur on a rolling five-year basis. In the four off years an internal panel is assembled to examine how well CSREES is addressing the expert panel's recommendations. These internal reports are crafted to specifically address the issues raised for a particular portfolio. Electronic versions of both external and internal reviews for all portfolios are located on the Agency's website (http://www.csrees.usda.gov/about/strat_plan_portfolio.html).

Even though the expert reports were all written independent of one another on portfolios comprised of very different subject matter, several themes common to the set of review reports have emerged. This set of issues has repeatedly been identified by expert panels and requires an agency-wide response. The agency has taken a series of steps to effectively respond to those overarching issues.

- **Issue 1: Getting Credit When Credit is Due**

For the most part panelists were complimentary when examples showing partnerships and leveraging of funds were used. However, panelists saw a strong need for CSREES to better assert itself and its name into the reporting process. Panelists believed that principal investigators who conduct the research, education and extension activities funded by CSREES often do not highlight the contributions made by CSREES. Multiple panel reports suggested CSREES better monitor reports of its funding and ensure that the agency is properly credited. Many panelists were unaware of the breadth of CSREES activities and believe their lack of knowledge is partly a result of CSREES not receiving credit in publications and other material made possible by CSREES funding.

Issue 1: Agency Response:

To address the issue of lack of credit being given to CSREES for funded projects, the Agency implemented several efforts likely to improve this situation.

First CSREES developed a standard paragraph about CSREES's work and funding that project managers can easily insert into documents, papers and other material funded in part or entirely by CSREES.

Second, the Agency is in the process of implementing the "One Solution" concept. One Solution will allow for the better integration, reporting and publication of CSREES material on the web. In addition, the new Plan of Work (POW), centered by a logic model framework, became operational in June 2006. Because of the new POW requirements and the POW training conducted by the Office of Planning and Accountability (OPA), it will be simpler for state and local partners to line up the work they are doing with agency expenditures. This in turn

will make it easier for project managers to cite CSREES contributions when appropriate.

The Agency has started the process of upgrading the Current Research Information System (CRIS), once upgraded it will be named the CSREES Information System (CIS). The CIS will allow users to access information from the Plan of Work (POW) and new Standard Report in a more effective and efficient manner. In addition to the CIS, the new Annual Reporting system that is based on activities discussed in the POW was launched in 2008.

- **Issue 2: Partnership with Universities**

Panelists felt that the concept of partnership was not being adequately presented. Panelists saw a need for more detail to be made available. Panelists asked a number of questions revolving around long-term planning between the entities they also asked how the CSREES mission and goals were being supported through its partnership with universities and vice versa.

Issue 2: Agency Response:

CSREES has taken several steps to strengthen its relationship with university partners. During the November 2005 National Association of State University and Land Grant Colleges (NASULGC) meeting in Washington, D.C., Dr. Colien Hefferan announced a new cooperative program entitled the new NPL Institutional Liaison program. The primary goal of this program is to strengthen the relationship between CSREES and its state partners, thus enhancing the effectiveness of the work done by CSREES. Through teleconferences, campus visits, e-mails and other meeting opportunities; CSREES's knowledge and understanding of institutional interests and needs will increase. CSREES is committed to learning more about state research, extension and education activities, strategic plans, and goals.

NPL Liaisons have the following duties:

- Become knowledgeable about the administrative structure budget sources and major program commitments of your institution
- Meet regularly with the CSREES deputy administrator liaison with your region
- Make quarterly phone calls or teleconferences to appropriate university officials in order to create ongoing dialogue of shared interests and needs
- Schedule campus visit/s in order to enhance the partnership
- Serve as the joint reviewers of your integrated annual plans of work from cooperative extension and research
- Identify partnership opportunities within CSREES and other federal agencies to strengthen your programs and assist in meeting your goals

Finally, several trainings that focused on the POW were conducted by CSREES in geographic regions throughout the country. A major goal of this training was to

better communicate CSREES goals to state leaders which will facilitate better planning between the universities and CSREES.

- **Issue 3: National Program Leaders**

Without exception the portfolio review panels were complimentary of the work being done by NPLs. They believe NPLs have significant responsibility, are experts in the field and do a difficult job admirably. Panelists did however mention that often times there are gaps in the assignments given to NPLs. Those gaps leave holes in programmatic coverage.

Issue 3: Agency Response:

CSREES values the substantive expertise that NPLs bring to the Agency and therefore requires all NPLs to be experts in their respective fields. Given the budget constraints often times faced by the agency, the agency has not always been able to fund needed positions and had to prioritize its hiring for open positions. In addition, because of the level of expertise CSREES requires of its NPLs, quick hires are not always possible. Often, CSREES is unable to meet the salary demands of those it wishes to hire. It is essential that position not only be filled but filled with the most qualified candidate.

Operating under these constraints and given inevitable staff turnover, gaps will always remain. However, establishing and drawing together multidisciplinary teams required to complete the portfolio reviews has allowed the Agency to identify gaps in program knowledge and ensure that these needs are addressed in a timely fashion. To the extent that specific gaps are mentioned by the expert panels, the urgency to fill them is heightened.

- **Issue 4: Integration**

Lack of integration has been highlighted throughout the panel reviews. While review panelists certainly noted in their reports where they observed instances of integration, almost without fail panel reports sought more documentation in this regard.

Issue 4: Agency Response:

Complex problems require creative and integrated approaches that cut across disciplines and knowledge areas. CSREES has recognized the need for these approaches and has undertaken steps to remedy this situation. CSREES has recently mandated that up to twenty-six percent of all NRI funds be put aside specifically for integrated projects. These projects cut across functions as well as disciplines and ensure that future Agency work will be better integrated. Integration is advanced through the portfolio process which requires cooperation across units and programmatic areas.

- **Issue 5: Extension**

While most panels seemed satisfied at the level of discussion that focused on research, the same does not hold true for extension. There was a call for more

detail and more outcome examples based upon extension activities. There was a consistent request for more detail regarding not just the activities undertaken by extension but documentation of specific results these activities achieved.

Issue 5: Agency Response:

Conferences have been conducted to increase the awareness of improved methodologies and reporting systems for documenting outcomes and impacts for the Agency. A CSREES Planning and Evaluation Mini-Conference was held April 23-24, 2007 in conjunction with the Administrative Officers' Conference in Seattle, WA. This mini-conference was designed for those planning programs or engaged in performance measurement and program evaluation. Participants learned about Plan of Work reporting, what CSREES has learned from the 2007-2011 Plans submitted, and how CSREES has used and expects to use information from annual reports and plans.

In addition to the CSREES Planning and Evaluation Mini-Conference, CSREES, in partnership with Texas A&M University, started a bi-monthly CSREES Reporting Web Conference Series (RWC) in February 2008. This series originated from requests for more information on various topics identified at the 2007 CSREES Planning and Accountability Mini-Conference. Topics for the series include:

- Agricultural Research, Extension, and Education Reform Act (AREERA);
- Plans of Work (POW);
- Annual Reports;
- One Solution;
- CRIS (soon to become CSREES Information System (CIS)); and
- Outcome reporting.

The AREERA Plan of Work and Annual Reporting system (POW) made extension-based results and reporting a priority. The new POW includes program descriptions and progress reports limited to four legislatively prescribed lines of funding. POW includes descriptions and annual accomplishments for each subject program. POW is a database application containing a combination of structured data and unstructured text box fields. These reports provide state level documentation of extension outcomes and impacts not previously captured in Agency wide reporting systems. Approved state plans of work and annual reports will be available in the Research, Education, and Economics Information System (REEIS) in the fall of 2008.

- **Issue 6: Program Evaluation**

Panelists were complimentary in that they saw the creation of OPA and portfolio reviews as being the first steps towards more encompassing program evaluation work; however, they emphasized the need to see outcomes and often stated that the scores they gave were partially the result of their own personal experiences

rather than specific program outcomes documented in the portfolios. In other words, they know first hand that CSREES is having an impact but would like to see more systematic and comprehensive documentation of this impact in the reports.

Issue 6: Agency Response:

The effective management of programs is at the heart of the work conducted at CSREES and program evaluation is an essential component of effective management. In 2003 the PREP process and subsequent internal reviews were implemented. Over the past four years 14 portfolios have been reviewed by expert panel members and continue to be self-assessed annually. Each year this process improves, including reconfiguration of several portfolios to become better structured for planning and assessment. NPLs are now familiar with the process and the staff of the Office of Planning and Accountability (OPA) has implemented a systematic process for pulling together the material required for these reports.

Simply managing the process more effectively is not sufficient for raising the level of program evaluations being done on CSREES funded projects to the highest standard. Good program evaluation is a process that requires constant attention by all stakeholders and the agency has focused on building the skill sets of stakeholders in the area of program evaluation. The OPA has conducted training in the area of evaluation for both NPLs and for staff working at Land-Grant universities. This training is available electronically and the OPA will be working with NPLs to deliver training to those in the field.

The OPA is working more closely with individual programs to ensure successful evaluations are developed, implemented and the data analyzed. Senior leadership at CSREES has begun to embrace program evaluation and over the coming years CSREES expects to see state leaders and project directors more effectively report on the outcomes of their programs as they begin to implement more rigorous program evaluation. The new POW system ensures data needed for good program evaluation will be available in the future.

The newly formatted annual review document has encouraged the discussion of program evaluations conducted regarding programs funded by the Agency for the particular portfolio being highlighted.

- **Issue 7: Logic Models**

Panelists were consistently impressed with the logic models and the range of their potential applications. They expressed the desire to see the logic model process used by all projects funded by CSREES and hoped not only would NPLs continue to use them in their work but, also, that those conducting the research and implementing extension activities would begin to incorporate them into their work plans.

Issue 7: Agency Response:

Logic models have become a staple of the work being done at CSREES and the Agency has been proactive in promoting the use of logic models to its state partners.

Two recent initiatives highlight this. First, in 2005, the POW reporting system into which states submit descriptions of their accomplishments was completely revamped. The new reporting system now closely matches the logic models being used in portfolio reports. Beginning in fiscal year 2007, states will be required to enter all of the following components of a standard logic model. These components include describing the following:

- Program Situation
- Program Assumption
- Program Long Term Goals
- Program Inputs which include both monetary and staffing
- Program Output which include such things as patents
- Short Term Outcome Goals
- Medium Term Outcome Goals
- Long Term Outcome Goals
- External Factors
- Target Audience

A series of training workshops were conducted by the OPA for staff from CSREES and from the land grant partnership. OPA senior staff traveled to regional conferences attended by Project Directors and Principal Investigators funded by CSREES. They conducted workshops on budget and performance integration and logic models. These sessions helped our partners understand the full picture and emphasized the need for our partners to report their accomplishments. Senior staff presented the logic model as a conceptual as well as an application tool useful for planning and reporting. Partners have now begun to use logic model in their work as well as report their accomplishments. In fact the Competitive Program unit of the Agency has made the inclusion of logic models a requirement for Integrated Programs.

Appendix B - Detailed Funding Tables for Primary KAs – CSREES Funding

KA 603: Market Economics CSREES Funding Reported in the Current Research Information System						
\$ thousands						
Funding Sources	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Total
Hatch	2,068	1,673	1,471	1,316	1,286	7,814
McIntire-Stennis	154	76	71	61	61	423
Evans Allen	153	109	172	193	161	788
Animal Health	0	0	0	0	0	0
Special Grants	1,539	1,775	1,098	1,048	1,171	6,631
NRI Grants	33	367	78	294	305	1,077
SBIR Grants	99	149	98	8	30	384
Other CSREES	549	1,126	978	1,397	1,030	5,080
Smith-Lever 3(b) and (c)	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
Smith-Lever 3(d)	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
1890 Extension	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
Higher Education	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
Total	4,595	5,275	3,966	4,317	4,044	22,197

*n/a = Funding data are not available for that fiscal year

KA 604: Marketing and Distribution Practices CSREES Funding Reported in the Current Research Information System						
\$ thousands						
Funding Sources	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Total
Hatch	1,676	1,563	1,229	1,147	1,216	6,831
McIntire-Stennis	132	138	112	157	187	726
Evans Allen	349	481	484	391	422	2,127
Animal Health	0	0	0	0	0	0
Special Grants	2,004	1,695	2,236	2,518	2,315	10,768
NRI Grants	192	219	180	1,081	377	2,049
SBIR Grants	537	152	515	826	623	2,653
Other CSREES	541	553	301	736	2,830	4,961
Smith-Lever 3(b) and (c)	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
Smith-Lever 3(d)	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
1890 Extension	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
Higher Education	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
Total	5,431	4,801	5,057	6,855	7,970	30,114

*n/a = Funding data are not available for that fiscal year

KA 606: International Trade and Development Economics CSREES Funding						
Reported in the Current Research Information System						
\$ in thousands						
Funding Source	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Total
Hatch	1,152	914	748	736	1,037	4,587
McIntire-Stennis	77	90	87	86	100	440
Evans Allen	201	94	69	144	240	748
Animal Health	0	0	0	0	0	0
Special Grants	439	607	408	661	636	2,751
NRI Grants	233	333	26	470	39	1,101
SBIR Grants	0	75	79	0	0	154
Other CSREES	48	95	419	503	371	1,436
Smith-Lever 3(b) and (c)	n/a	n/a	n/a	n/a	n/a	n/a
Smith-Lever 3(d)	n/a	n/a	n/a	n/a	n/a	n/a
1890 Extension	n/a	n/a	n/a	n/a	n/a	n/a
Higher Education	n/a	n/a	n/a	n/a	n/a	n/a
Total CSREES	2,150	2,208	1,836	2,601	2,423	11,218

*n/a = Funding data are not available for that fiscal year

KA 610: Domestic Policy Analysis CSREES Funding						
Reported in the Current Research Information System						
\$ thousands						
Funding Sources	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Total
Hatch	1,561	1,435	1,649	1,657	1,395	7,697
McIntire-Stennis	199	174	262	299	309	1,243
Evans Allen	47	305	252	241	233	1,078
Animal Health	0	0	0	0	0	0
Special Grants	1,214	3,052	2,812	3,627	4,139	14,844
NRI Grants	216	329	24	874	288	1,731
SBIR Grants	0	0	0	0	0	0
Other CSREES	862	738	1,124	890	693	4,307
Smith-Lever 3(b) and (c)	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
Smith-Lever 3(d)	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
1890 Extension	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
Higher Education	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*
Total	4,099	6,033	6,123	7,588	7,057	30,900

*n/a = Funding data are not available for that fiscal year

KA 611: Foreign Policy and Programs CSREES Funding Reported in the Current Research Information System						
\$ in thousands						
Funding Sources	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Total
Hatch	140	87	188	172	210	797
McIntire-Stennis	4	4	4	6	7	25
Evans Allen	0	0	0	0	0	0
Animal Health	0	0	2	6	2	10
Special Grants	488	561	346	580	603	2,578
NRI Grants	48	0	13	205	0	266
SBIR Grants	0	0	0	0	0	0
Other CSREES	225	251	225	241	368	1,310
Smith-Lever 3(b) and (c)	n/a	n/a	n/a	n/a	n/a	n/a
Smith-Lever 3(d)	n/a	n/a	n/a	n/a	n/a	n/a
1890 Extension	n/a	n/a	n/a	n/a	n/a	n/a
Higher Education	n/a	n/a	n/a	n/a	n/a	n/a
Total CSREES	905	903	778	1,210	1,190	4,986

*n/a = Funding data are not available for that fiscal year

Appendix C - Detailed Funding Tables for Primary KAs – All Known Funding:

KA 603: Market Economics Overall Funding Reported in the Current Research Information System						
\$ thousands						
Funding Sources	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Total
CSREES Admin	4,595	5,274	3,967	4,317	4,044	22,197
Other USDA	833	711	374	838	950	3,706
Other Federal	716	862	491	3,289	647	6,005
State Appr.	10,322	7,842	6,841	7,189	6,214	38,408
Self-Gen	345	569	572	804	525	2,815
Ind/Gr Agrmt	1,311	808	889	1,294	871	5,173
Other Non-Fed	1,106	1,035	1,006	1,538	745	5,430
Total	19,227	17,101	14,140	19,269	13,995	83,732

KA 604: Marketing and Distribution Practices CSREES Funding Reported in the Current Research Information System						
\$ thousands						
Funding Sources	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Total
CSREES Admin	5,430	4,802	5,057	6,855	7,970	30,114
Other USDA	1,390	770	659	1,260	1,131	5,210
Other Federal	925	1,165	816	2,954	448	6,308
State Appr.	7,420	6,535	5,769	7,069	5,481	32,274
Self-Gen	359	283	298	657	589	2,186
Ind/Gr Agrmt	954	838	935	1,960	748	5,435
Other Non-Fed	506	707	894	1,694	1,006	4,807
Total	16,985	15,101	14,428	22,449	17,372	86,335

KA 606: International Trade and Development Economics Overall Funding Reported in the Current Research Information System						
\$ in thousands						
Funding Sources	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Total
CSREES Admin	2,151	2,208	1,835	2,601	2,423	11,218
Other USDA	1,328	610	554	1,133	872	4,497
Other Federal	788	1,331	1,069	3,546	940	7,674
State Appr.	4,905	5,421	5,258	6,368	5,424	27,376
Self-Gen	139	122	106	491	273	1,131
Ind/Gr Agrmt	801	589	402	778	479	3,049
Other Non-Fed	333	732	815	751	481	3,112
Total	10,445	11,013	10,038	15,667	10,891	58,054

KA 610: Domestic Policy Analysis Overall Funding Reported in the Current Research Information System						
\$ thousands						
Funding Sources	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Total
CSREES Admin	4,098	6,033	6,123	7,588	7,057	30,899
Other USDA	1,445	1,261	945	1,455	5,705	10,811
Other Federal	949	700	1,010	2,989	1,361	7,009
State Appr.	6,748	6,861	6,434	9,819	8,664	38,526
Self-Gen	288	246	366	815	431	2,146
Ind/Gr Agrmt	702	655	728	1,130	992	4,207
Other Non-Fed	774	769	966	2,251	1,393	6,153
Total	15,004	16,525	16,573	26,047	25,602	99,751

KA 611: Foreign Policy and Programs Overall Funding Reported in the Current Research Information System)						
\$ in thousands						
Funding Sources	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	Total
CSREES Admin	905	903	777	1,210	1,190	4,985
Other USDA	241	247	53	177	141	859
Other Federal	122	92	99	504	6,699	7,516
State Appr.	686	593	972	1,407	1,082	4,740
Self-Gen	33	19	23	34	62	171
Ind/Gr Agrmt	121	65	115	210	215	726
Other Non-Fed	503	45	52	327	3,570	4,497
Total	2,610	1,964	2,090	3,868	12,959	23,491

Appendix D - List of Supporting Programs

Programs Related to Markets, Trade, Policy and International Development	
Name of Related Program	Description of Relationship
Risk Management Education Program	Price and market risk issues
Sustainable Agriculture Research and Education	Market and trade issues
Natural Resources and Environment	Markets for environmental services; policy
Small, Minority, Disadvantaged Farmers	Market issues
Plant and Animal Systems	Market, trade, regulation and policy issues
Higher Education Programs	Economics teaching
Family and Consumer Science	Consumer economics
Rural Development	Market, trade, regulation and policy issues
Competitive Programs	NRI, SBIR, etc.

Key program areas**NRI 61.0 – Agricultural Markets and Trade Program Awards for FY 2007****1. Situation description**

- Agricultural markets and trade are being profoundly affected by the dramatic, ongoing expansion of biofuels production.
- Global food shortages, price increases and the resulting starvation and malnourishment in some regions have become more pronounced.
- Impacts of alternative scenarios regarding biofuels technology development, fossil energy availability, and government policy needs to be examined to promote different outcomes for the agricultural economy and the world community.

2. Inputs

- The NRI – Agricultural Markets and Trade program provides research grants to advance knowledge to enhance international competitiveness of American Agriculture (Strategic Goal #1) and in turn enhance the competitiveness of farm economies (Goal #2) and increase economic opportunities (Goal #3) . For example, the grant provided in FY 2007 to Henry Bryant at Texas A & M University, entitled, “Effects of Biofuels Technology Development And Fossil Energy Extraction Conditions”.

Activities

- Texas A&M University is examining the effects of alternative scenarios including various cellulosic ethanol production processes using various feedstocks and production of biodiesel from algae oil. Scenarios regarding future extraction conditions for fossil energy sources incorporate a diverse range of projections regarding world reserve levels and geologically feasible rates of production for

conventional oil, natural gas, and coal. They will examine outcomes under alternative scenarios, with attention focused particularly on (1) trade offs among competing uses of agricultural commodities, (2) the output of major agricultural producers competing with the U.S., world agricultural market conditions, and U.S. exports, (3) animal agriculture, (4) profitability of the agricultural sector, (5) input costs, especially land rents, and (6) land use patterns.

3. Expected Outputs -

- A recursive-dynamic computable general equilibrium model of world economic activity will be developed. It will consist of 18 regions, 37 sector computational general equilibrium model of world economic activity with detailed representation of agricultural and biofuels production sectors.
- The model will characterize the general equilibrium effects of alternative possible future states of the world on world agricultural markets and trade.

4. Expected Outcomes

- Government policies that are based on stronger economic evaluation, especially with regard to biofuel and alternative energy production.
- Reduced adverse impacts of biofuel production on food and feed prices, food consumption and nutrition, and the environment.
- As this is a NRI strengthening grant provided to a new researcher, one of the expected outcomes is a new researcher with expertise in international trade and modeling.

NRI 61.0 – Agricultural Markets and Trade Program Awards for FY 2007

1. Situation description

- Growth in retail sales in the US organic food industry has equaled 20 percent or more annually since 1990.
- More information is needed for the orderly development of the industry, especially with regard to information on consumer perceptions and market chains.

2. Inputs

- A primary goal of some of the NRI – Agricultural Markets and Trade program research grants is to advance knowledge to enhance competitiveness of farm economies (Goal #2) and increase economic opportunities in rural communities (Goal #3). In FY 2007, 4 grants were provided to different institutions to study the marketing of organic foods. For example, the grant provided in FY 2007 to Pennsylvania State University entitled, “Strategic Procurement And Marketing Behavior by U.S. Food Retailers: The Case Of Organic Foods”.

Activity

- The Pennsylvania State University project aims to better understand the nature of strategic procurement and marketing behavior by retailers so that all players in the organic food channel - from producers to consumers - can make informed decisions. Their team will investigate and analyze strategic procurement and marketing behavior by food retailers in the organic product segment. Topics for specific investigation include the use of private procurement contracts with organic suppliers, the relationship of organic private label emergence to the organic-to-conventional price premium. The activities include: (1) conducting and analyzing a nationwide survey of retailers to examine their procurement, promotion, and sale of organic food, (2) linking the retail survey to consumer purchase data to analyze strategic marketing of organic foods, and (3) linking the retail survey to a survey of organic handlers to compare, contrast, and analyze the organic food procurement and marketing behaviors of food retailers and certified organic food processors and other intermediaries.

3. Expected Outputs

Completed nationwide survey of retailers
Analyzed strategic marketing of organic foods
Linked stakeholders in the organic food chain

4. Expected Outcomes

- Government policies that are based on stronger economic evaluation, especially with regard to biofuel and alternative energy production.
- Reduced adverse impacts of biofuel production on food and feed prices, food consumption and nutrition, and the environment.

As this is a NRI strengthening grant provided to a new researcher, one of the expected outcomes is a new researcher with expertise in international trade and modeling.

SBIR – Markets and Trade Program Awards for FY 2007

1. Situation description

- Maine is famous for its lobster and enjoys an inherent brand equity that is unparalleled. Yet, no company has taken advantage of leveraging this perceived quality from a mass marketing perspective.
- Although lobsters are harvested in Maine, basic lobster meat extraction practices take place primarily in Canada.

2. Inputs

- The SBIR – Markets and Trade program provides research grants to advance knowledge to enhance the international competitiveness (Strategic Goal #1) and increase economic opportunities (Goal #3). For example, the Phase II grant provided in FY 2007 to Saltwater Marketing, LLC, entitled, “Create A Paradigm Shift in the Supply And Consumption of Maine Lobster by Creating Value-Added Retail Products and Reducing Supply-Side Cost”.
- This project is focusing on building markets for a new product category of Maine branded lobster, developing products that address important consumer needs, creating branding elements and test marketing. This is achieved by: identifying and evaluate processing and packaging technologies that can be used to produce ready to prepare lobster products; employing an innovative business model and unique partnership that also offers important benefits to lobster harvesters; and developing a Strategic marketing Roadmap for commercialization.

3. Outputs

- New kinds of lobster food products in the market.
- Branded lobster products from Maine more widely available in the US.

4. Outcomes

The expected outcomes include:

- Increased economic opportunities for lobster harvesters and rural economies in Maine.
- Reduced imports of seafood, especially lobster products, by the United States.

SBIR –Markets and Trade Program Awards for FY 2007

1. Situation description

- World agricultural markets are highly vulnerable to small fluctuations in demand and supply caused by changes in climate, consumer tastes and preferences, government policies, etc
- A more accurate prediction of agricultural production in different regions of the world can help farmers and agribusinesses better allocate resources and help reduce the volatility in prices and output.

2. Inputs

- The SBIR – Markets and Trade program provides research grants to advance knowledge to enhance the international competitiveness (Strategic Goal #1) and increase economic opportunities (Goal #3). For example, the Phase I grant provided in FY 2007 to GDA Corp, entitled, “An Advanced Information System for Timely Assessments of International Crop Market Opportunities”.

Activities

The objectives of this project are: Create capabilities to extract summary crop statistics from large spatial time-series datasets for near-real time generation of analytical data products, Enhance regional and global crop commodity monitoring, forecasting, marketing, and trade decision-making, Improve the accuracy, frequency, and spatial resolution of statistical crop assessments and forecasts and crop intelligence delivery for decision making, Provide timely assessments of emerging market opportunities for U.S. commodity crops, Boost ability of US agro-businesses to rapidly respond to and capitalize on new market opportunities both nationally and globally, Make the resulting analytical crop data products ready for integration into the operational framework of USDA Foreign Agricultural Service (FAS), NASA-FAS-UMD Global Agriculture Monitoring (GLAM) Project, U.S. Agribusiness, and commodity exchanges.

3. Outputs

- A prototype of a set of automated, decision support algorithms for near-real time, analytical assessment of large volumes of satellite derived time-series data on crop conditions.
- Enhanced regional and global agricultural monitoring and improved timeliness and accuracy of current and projected crop commodity information relative to temporal marketing opportunities

4. Outcomes

The expected outcomes include:

- Improved FAS operational processing of time-series data and marketing and trade assessments.
- More competitive farm economies based on more accurate data on world agricultural production.
- Less fluctuation in world agricultural production.

Diversity, Social Justice, and Urban Programs

Outputs:

The ECOP National Committee on Extension Diversity has graduated it's agenda to National Association of State Colleges and Land Grant Universities (NASULGC)-Commission on Access, Diversity and Excellence. This change adds higher visibility to Diversity and Social Justice Programs nationwide. The ECOP National Committee on Extension Diversity developed a national strategic plan, sponsors an annual award,

developed a national center for diversity operating as an eXtension Community of Practice (COP), and conducts diversity training for leaders in other states.

The Change Agent State for Diversity Project is a consortium of 16 states that mobilize new practices within their state and region; and expand and improve the knowledge base of diversity and pluralism within the land grant system.

CSREES has a Diversity Advisory Council to the Administrator. The role of this group is partner with the land grant system to model systemic behaviors at the federal level as are encouraged in the states. This group host a national diversity award, conducts in-service trainings for the staff such as the Onion Skin Diversity Training and Michigan State Multicultural Awareness Training. Ninety-eight percent of the participants who took the training stated that they had new learning from these in-service trainings.

CSREES employees participated in World AIDS Day. Three employees distributed read AIDS awareness bracelets in celebration of the day. AIDS has killed more than 25 million people worldwide, including more than 520,000 people in the United States.

Several CSREES employees have completed the NTL Institute Diversity Practitioner Certification Program. This is an eighteen month training program which includes an international experience that perpetuates the theories, knowledge, and practice for diversity practitioner's world wide. A research practicum was conducted with all member of the CSREES Executive Council to assess how well our leaders are doing in implementing diversity change in the system.

Several CSREES employees participated annually in the USDA Gay and Lesbian Pride Month Celebration. The Stonewall Riots in June 1969 marked the beginning of the gay liberation movement in the United States. In June 1999, Stonewall was listed on the National Register Historic Places for its significance to gay and lesbian history. The gay pride flag debuted at the 1978 San Francisco Gay and Lesbian Freedom Day Parade, and was designed by Gilbert Baker.

Outcomes:

It is expected that CSREES leads will lead the land grant college and university system in the promotion and advancement of diversity and social justice practices in its workforce, programs, and outreach to the community.

It is expected that CSREES will continue and ensure that employees are trained and educated in diversity work to end world injustice and human oppression. It is expected that CSREES will model fair and equitable behavior toward all diverse groups within the agency.

Urban Extension Programs:

Output:

The ECOP National Urban Task Force has graduated its agenda to the National Association of State Colleges and Land Grant Universities (NASULGC)-Commission on

the Urban Agenda. This change adds higher visibility to Urban Extension Programs nationwide.

The North Central States host the Bi Annual National Urban Conference. Approximately 500 urban leaders attend this conference to advance the work of urban counties and metropolitan areas of the United States. Administrators, Program Leaders, Regional and County Directors explored best practices, successful models, operations and systems for staffing, funding, and programming urban programs to acknowledge urban communities is agricultural framework.

Outcomes

It is expected that CSREES will support the mission, goals, and objectives of administrator, program leaders, regional, and county director that must respond to the needs of urban, metropolitan, and suburban populations. It is expected that CSREES will openly fund request for urban, metropolitan, and suburban programs to meet the needs of a changing demographic country.

Appendix E - Partnering Agencies and Other Organizations

Markets, Trade, Policy and International Development Partnering Agencies and Organizations	
Name of Program	Agency Type
Agricultural Marketing Service	USDA Agency
Economic Research Service	USDA Agency
Foreign Agricultural Service	USDA Agency
Natural Resources Conservation Service	USDA Agency
Forest Service	USDA Agency
Agricultural Marketing Service	USDA Agency
Commodity Futures Trading Commission	Non-USDA Federal Agency
State Department	Non-USDA Federal Agency
Agency for International Development	Non-USDA Federal Agency
International Trade Commission	Non-USDA Federal Agency
Environmental Protection Agency	Non-USDA Federal Agency
American Agricultural Economics Assn,	External Organization
Farm Foundation	External Organization
American Farm Bureau Federation	External Organization
Producer, Environmental, other special interest groups	External Organization
World Trade Organization	External Organization

Appendix F - Program Evaluations:

Markets, Trade, Policy and International Development Program Evaluations				
Date	Type of Evaluation/Analyses	Brief Description	Evaluation Recommendations	What Was the Effect
2007	None to report			

Appendix G: Number of Funding Programs by Funding Source

This portfolio continues to make a substantial contribution to the economics and policy literature generated by eligible CSREES funding partners. In 2007, forty-seven marketing and trade projects and 33 Domestic Policy projects and twelve global competitiveness and foreign policy-related programs were completed and terminated. These added to the marketing, trade and public policy knowledge base in several broad categories:

- Market Performance, Policy and Regulation
- Consumers, Nutrition, and Human Health
- Environment/Natural Resources
- Marketing Management Decision Making
- Competitiveness
- New Products
- International Trade and Development
- Biotechnology/Genetics

New Research and Education Projects for Marketing, Trade, International Development, and Policy, 2007			
Funding Source	Marketing and Distribution (KA 603, 604)	International Trade and Development (KA 606)	Domestic and Foreign Policy (KA 610, 611)
CSREES			
Small Business	3		
Hatch	30	10	26
McIntire Stennis			3
Evans Allen	1		
NRI	6		2
Other	4		1
Other Extension	2		
RREA			1
SERD	1		1
Special			
Other USDA			
Coop Agreement			
Contract			
Grant			
In-house	4	2	
State	4	5	5

Source: Current Research Information System

The Marketing, Trade, Policy and International Development portfolio contains a total of nearly 1000 active research and education projects, including 549 marketing and

distribution, 273 international trade and development, 410 active domestic policy, and 80 active foreign policy projects (Note the sum may be greater than the total because some projects include multiple Knowledge Areas). Similar discrete and countable data are not available for extension programs and projects.

Appendix H: Portfolio Level Outputs and Outcomes

More than 50 public universities from across the country exhibited at the Annual Agricultural Science and Education Exhibition on Capitol Hill. This yearly exhibition informs lawmakers and Congressional staff on the need to increase support for agricultural research and innovation. The U.S. faces major challenges—which must be addressed by government leaders and lawmakers as well as by scientists, engineers, and academic leaders—including the need to ensure improved food safety and health through agricultural and food systems, and lessen the risks of local and global climatic change on food, fiber, and fuel production.

The exhibition provided public universities the chance to show practical applications and the societal benefits of federally funded research. The theme of this year's exhibits was nutrition and health; exhibits that included economic components include:

- Bridging the Gap (Gateway to Agricultural Professions) – California State Univ., Fresno, and Fresno City College
- Food for Health at UCD: Past, Present, and Future – Univ. of California, Davis
- Biomedical Agriculture: A New Approach to Improving the Human Health Attributes of Staple Food Crops – Colorado State Univ.
- From Harvest to Home: Ready to Eat Food Safety Research Feeds Cooperative Extension Nutrition Programs – Univ. of Delaware
- Food Will Be Your Medicine – Univ. of Illinois, Urbana-Champaign
- Wood Utilization Research (WUR) Centers – Michigan State Univ.; Mississippi State Univ.; Oregon State Univ.; Univ. of Maine; Univ. of Minnesota Duluth; North Carolina State Univ.; Univ. of Tennessee; Inland Northwest Consortium (Univ. of Idaho; Univ. of Montana; and Washington State Univ.); Univ. of Alaska; and West Virginia Univ.
- Functional Food for the Future – Ohio State Univ.
- Feeding the World with Dried Distillers Grains – South Dakota State Univ., in cooperation with North Central Agricultural Research Laboratory, Agricultural Research Service, USDA
- Healthy Foods and Healthy Lifestyles – Texas A&M Univ.
- Investing in Science...Securing Our Future – Cooperative State Research, Education, and Extension Service, USDA

During 2007, forty-seven funded research projects were completed and terminated. A review of CRIS data for these marketing and trade projects shows that they fall into several broad categories:

- Market Performance, Policy, Regulation
- Consumers, Nutrition, Human Health
- Natural Resources
- Marketing Management Decision Making
- Competitiveness

- New Products

The following table describes the details and vetted findings for completed research projects. All projects include a listing of reviewed or juried publications, excluded from this table for brevity.

Outputs and Outcomes for CSREES Markets, Trade, Policy and International Development Funded Projects Completed in 2007		
Topic Area State	Details	Peer Reviewed/Vetted Findings
Market Performance, Policy, Regulation		
Arkansas	Used bilateral geographical basis for trading partners to minimize geographic bias	Identified data gaps needed to conduct empirical analyses of trade impacts between the U.S. and Vietnam.
California	Generalized maximum entropy approach estimated sample-selection models with small samples better than 2 well-known approaches; Developed new nonparametric approach to predict economic series such as unemployment rates	Milk marketing orders are regressive; Fat taxes are unlikely to have much impact on fat consumption
California	Studied introduction of enforcement costs and potential for fraudulent behavior in analysis of markets for genetically modified and organic food products; Welfare analysis of major ag policy instruments	Current policy design creates economic incentives for all producers that do not adopt conservation practices to masquerade as adopters and claim government payments they are not entitled to
Connecticut	Developed dynamic product launch/exit model for breakfast cereal industry; demonstrated how launch/exit of a brand depends upon degree of demand uncertainty surrounding the brand; developed a vertical channel model incorporating branded and private label pricing; Demonstrated that supermarket retailers have buyer power against manufacturer's brands when they market private label product	Policy analyzed included taxes, minimum wage laws, gasoline and pollution regulations, merger rules, and many others
Illinois	Developmental efforts led to prototype technology for refinement and commercialization through adaptive research and tech transfer programs, some by public agencies and institutions	Applications for at least 4 patents are in progress; For 19 projects reviewed, in addition to tangible outcomes for commercialization, researchers document progress in peer reviewed publications and presentations at scientific meetings
Iowa	Identified opportunities, processes with data requirements that create value or reduce cost via information technology	Data from 20,000 lots of feeder cattle sold at 9 auctions found buyers paid premiums based on amount and source of information; Compared to no weaning and/or vaccination info., buyers paid

Outputs and Outcomes for CSREES Markets, Trade, Policy and International Development Funded Projects Completed in 2007		
		<p>premiums of \$2/cwt for seller claims, to over \$6/cwt for 3rd party certified claims;</p> <p>Comparison of single-source cattle to backgrounded mixed source showed feedlots should discount backgrounded cattle approx. \$8/head vs. single-source cattle.</p>
Nebraska	Evaluated impacts of changing structure of meat industry including price discovery under alternative pricing systems, trading institutions and methods of delivery	<p>U.S. beef would be more strongly positioned against Australian beef if chilled (not frozen), good marbling and lean/fat color, not aged as long as normally occurs in shipping;</p> <p>Consumer preference for domestic and imported steaks is influenced by the sensory scores applied for tenderness and flavor;</p> <p>Niche markets likely exist for beef guaranteed tender, hormone-free, antibiotic-free, and produced in environmentally-friendly manner</p>
New York	Identified key economic relationships and assessed impact of domestic/export commodity promotion programs on consumers, food industry and farmers	<p>Benefits of export promotion programs in terms of enhancing producer welfare are much greater than costs of the programs;</p> <p>Benefit-cost ratios show direct effects of U.S. rice, wheat and sorghum export promotion is benefiting grain producers</p>
Oregon	Analyzed international and domestic food demand and firm strategies as affected by economic conditions, technological change, demographic characteristics	
West Virginia	Assessment and development of a legal/institutional framework for the development of aquaculture industry in WV	<p>Current regulatory and statutory scheme is a deterrent to the industry. Statutes and regulations poorly or vaguely written, dispersed among and between statutory and regulatory bodies of law or contain provisions that are unfair and illogical, difficult for lay and legal profession to clearly understand and apply</p>
Wisconsin	Economic analysis of competition issues and policies regarding the U.S. food industry	<p>Noncompetitive pricing by Canadian Wheat Board found in international durum markets but not international malting barley;</p> <p>Beef packer behavior consistent with theory of trigger pricing – at significant probabilities >90% packers choose cooperation when previous period was cooperation, non-cooperation when previous was non-cooperation</p>

Outputs and Outcomes for CSREES Markets, Trade, Policy and International Development Funded Projects Completed in 2007		
Consumers, Nutrition, Human Health		
Iowa	Developed conceptual framework for prioritizing opportunities to reduce foodborne risk; National Experts Roundtable informed industry, government, consumer groups and elicited input on developing framework to prioritize risks.	Lettuce and leafy green industry illustrate need scientific basis on food hazard transmission to develop effective data and system models for setting priorities in interventions for food safety control
Indiana	Examined nutritional outcomes of consumers dining at different types of restaurants	Nutrition orientated consumers less likely to choose fast food; Nutritional content of meals at table service restaurants no better than fast food restaurants, sometimes worse; Consistent supermarket buyers of nutritious foods in one category make nutritious choices in all categories; Households w/ children and w/ lower incomes tend to make poorer choices; true even when more nutritious versions, e.g., skim vs. whole milk, are cheaper
Oregon	Analyzed patterns of nutrient consumption and food demand using models to real world decision making more accurately, including impacts of changes in alternative public food assistance programs	Income growth and access to public transportation reduced inequality in 9 Chinese provinces; Rural-urban gap, provincial differentiation, unequal dist. of household heads' education increased inequality in childhood malnutrition
Vermont	Identified local, low-income consumers' attitudes and behaviors in fresh produce purchasing, identified fresh produce supplier marketing strategies; assessed interaction between consumers and suppliers	WIC participants have adequate of nutritional knowledge and varying reasons for not operationalizing information; While organic fresh produce is not generally affordable, non-organic varieties are readily available and affordable
Wisconsin	Examined effectiveness of Cause Related Marketing for agricultural products	Brand/cause fit is positively related to consumer attitudes; Stronger among consumers high in brand consciousness
Natural Resources		
Washington	Developed knowledge to create a marketing logistics system to create consumer demand and deliver roundwood building and woodworking materials	Substantial time, effort needed to implement consistent grading, quality, packaging, business systems across supplier network

Outputs and Outcomes for CSREES Markets, Trade, Policy and International Development Funded Projects Completed in 2007		
West Virginia	Assessed fundamental properties of Appalachian hardwoods relative to improved use and manufacturing	Optimal bucking system for Appalachian hardwood could increase value 26% to 43% per stem Rate of return for merchandising pulpwood logs sawn at 25, 30, 35, 40 dollars/ton ranged 10% to 39%
Marketing Decision Making		
Florida	Documented temp, and humidity variations in refrigerated sea containers and pallets in container; cost benefit analysis on technology and practices at critical handling steps to improve quality; forced-air cooling w/ vented cartons to reduce product temp. to optimal storage and transport temp. prior to loading	Produce handlers know what can be done to improve product quality and if the change will pay for itself; Recommendations to commercial perishable food handlers of cost-effective changes in distribution system improve retail quality
Michigan	Studied financial decision making, instruments and markets in ag sector; identified improvements in design, use and valuation of market-based risk management instruments.	Combining various types of financial contracts leads to changes in optimal levels of each contract and reduces income risk
Utah	Investigated the role non-price and non-income information plays in shaping demand for food, the response of agribusinesses to these changes in demand, and the implications for production agriculture.	Study demonstrated how consumers respond to changes in food labeling and media coverage related to genetically-modified food products. Also helped Utah producers add value based on research of "Utah's Own" labeling program.
Wisconsin	Developed strategic assessments of demand and supply needs for the pulp and paper industry, including competitive and trade analysis.	Research provided an assessment on the impact globalization has on forest product industries that will influence forest management plans and future marketing of U.S. forest products.
Competitiveness		
Florida	Modeled of distribution chains for mangoes, tomatoes allow companies and researchers to screen new technologies, methods and approaches to enhance decision-making on allocation of funds and resources	Recommendations to commercial perishable food handlers of specific, cost-effective changes in distribution system that improve produce quality at retail level
Hawaii	Developed a production budgeting model adopted by the Hawaii Beef Initiative Project	A private sector program oversight committee to systematically and regularly review program initiatives and activities
Florida	Evaluated woody cut production potential of ornamental	Farmers in Florida and U.S. Virgin Islands looking for alternative

Outputs and Outcomes for CSREES Markets, Trade, Policy and International Development Funded Projects Completed in 2007		
Virgin Islands	species in monoculture and silviculture systems; determined biophysical interactions between system components	crops or to add a commercial value to unused forest areas could benefit by planting ginger and heliconias in an agroforestry system
Iowa	Support Native and tribal serving colleges and find opportunities for collaboration among 1994s, 1862s, other Native serving institutions	Inventory of best practices for educational access to tribal college and economic development on Indian Reservations
Nebraska	Evaluated alternative pricing systems for cattle and management strategies that maximize profit under various pricing alternatives	BSE in North America and border closure between the U.S. and Canada had major impact on cull cow prices in Canada and altered cull cow markets in U.S.; Culling cows in Aug/Sep can be beneficial as cows are in better condition, weigh more, generally receive a higher market price than Oct/Nov
North Carolina	Modeled how retail price changes as consumer income, farm output, and marketing input price changes and described how price spread changes as retail price, farm output, and marketing input prices change	Market power is not main driving force behind rises in price spreads; Relative importance of increased consumer demand for food, through rising real incomes, suggests consumers continue to demand goods with higher value added
Utah	Quantified impact of non-price, non-income info. on market demand for value-added agricultural commodities and food products and responses of food manufacturers, wholesalers, grocers, restaurateurs, direct food marketing distribution channels to changes in consumer preference and demand in global food industry	Seller of trans fat free products preserved market share through labeling efforts; Marketing genetically modified foods in Netherlands showed difference in purchasing behavior before and after GM labels were introduced; Testing consumer reaction to info. regarding mad cow disease in retail meat markets in Utah found no significant response
West Virginia	Studied ways to enhance the global competitiveness of Appalachian hardwood industries by promoting the quality and efficient use of Appalachian hardwoods.	Through publications, workshops and demonstrations, the project helped West Virginia forest product manufacturers develop processing and marketing breakthroughs needed to keep Appalachian wood products globally competitive.
Washington	Researched mechanical means for harvesting asparagus, evaluate new technologies such as electronic graders/sorters	Economic analysis indicates that 3-row harvester must recover 70% of hand-harvested yield to be viable; Properly calibrated harvesters recover 80% to 100% of hand-harvested yield

Outputs and Outcomes for CSREES Markets, Trade, Policy and International Development Funded Projects Completed in 2007		
New Products		
Alabama	Marketing plan for breaded catfish nuggets developed; targeted family reunion planners in the south	Catfish processors developed new value-added products from catfish nuggets
Florida	Studied intercropping with longleaf pine effects on shrub productivity compared to monoculture.	Agroforestry approach for cut flower production to complement main tree crop is viable alternative to improve farmer's income
Maine	Assessed market potential for alternative species production in Maine's aquaculture industry	Info. on supply of haddock to U.S. market and price effect of changes in quantity supplied used to identify implications of impacts of development of farmed haddock industry in Maine
Montana	Evaluated and developed community-based businesses using local agricultural resources.	Four patents filed related to biolubricants, gluten-free cereals and 2 varieties of camelina released
Tennessee	Developed enterprise budgets including production costs and returns for pigeonpea under conditions typical of TN small farms	Agronomic and economic aspects favorable to produce the crop

Selected Examples of Impacts Resulting from CSREES Funded Markets, Trade, Policy and International Development Work	
State/Program	Outcomes/Impacts
Iowa food chain analysis implemented ISO-9000 quality management system (QMS)	Grain firm increased profitability by \$220/railcar shipped as result of inventory control QMS system; Created 10 internal auditor jobs, 2 quality manager jobs; Feedlots and cowherds earned \$25/head premiums providing verified age, & source info.
Iowa examined geographical indications, branding, and labeling	Worked with 900 Midwest agribusiness firms, exposed 250 clients to ag export assistance opportunities; Introduced international visitors to ag technology, expertise and products
Illinois developed an economically viable high-quality supply chains for value-added livestock products	Market developed 200,000 profiles of farmers and food related enterprises in IL, IA, GA, NE, KY, NY; Expanded to 11 states
Maine examined broader food shopping behavior and preferences and identify niche opportunities for small local grocers to attract and maintain a customer base	40 small grocers developed business plans to improve economic viability and potential for continued operation; 2 producer groups formed to examine opportunities to work with local retailers to market product

Appendix I: Major Outputs by Topic

Economic and Business Decision-Making Topics, Research Foci, Research Methodologies Employed, and Peer Reviewed Publications, Knowledge Area 609 Research Projects Completed in 2007			
Economic and Business Decision Topic	Research Focus	Research Methodologies Employed	Peer Reviewed Publications*
Preferences			
	Consumer	Co joint analysis General equilibrium analysis	0
	Land preservation wetlands mitigation	Market & non-market valuation Hedonic techniques Spatial optimization models	30
	Land use conversion	Residents preference Willingness to pay	1
Consumer Attitudes			
	Food safety Nutrition	Qualitative, censored dependent variables Endogenous binary/ordinal regressors Ordinal response models	27
Costs and Returns			
	Beef, poultry, dairy, forage, catfish, crawfish	Partial budgeting Budget generation Estimation	97
Benefits and Costs			
	Water quality	Hedonic techniques Spatial optimization models	86
Adoption of Technology			
	Genetic modification	Sequential game theory	22
	IPM Biotechnology research	Economic surplus analysis Cost & yield changes due to technology Likely adoption domain & rate Costs of irreversible damage	40
	Cotton	Probit adoption model Willingness to pay for precision	31
Public Policy			
	Environmental	Market & non-market valuation Hedonic techniques Spatial optimization Value of change & contribution of research Paths between policy change & research Geographic areas of policy influence Benefits under different states of nature Economic surplus analysis	31
Competitiveness			
	Small business development	Econometric model	14
	Regional exports	Various	84
	Timber Pulp & paper	Spatial models Econometric models	42
	Berry crops	Strategic planning	1

* Life of project

Appendix J: Performance Measures Progress Table

Explanation of Measure: This measure assesses portfolio progress toward improving and expanding marketing, trade, policy, and development related knowledge about agricultural, forestry, natural resource and related products and services to public and private constituencies. This knowledge ultimately leads to improved profitability, competitiveness and market efficiency.				
Baseline (FY 2004)	Target (total)	Actual		
		Focus Areas	Completed	Started
Fiscal Year 2005	50	Markets and Distribution	15	4
		International Trade and Development	29	17
		Domestic and Foreign Policy	3	2
Fiscal Year 2006	50	Markets and Distribution	5	9
		International Trade and Development	21	14
		Domestic and Foreign Policy	9	6
Fiscal Year 2007	50	Markets and Distribution	13	15
		International Trade and Development	10	15
		Domestic and Foreign Policy	5	6
Fiscal Year 2008*	50	Markets and Distribution	1	9
		International Trade and Development	3	8
		Domestic and Foreign Policy	1	6
Fiscal Year 2009	50			
Fiscal Year 2010	50			

* Partial year data

Source: Current Research Information System